Attachment 1 – Updated DMG Paint Remediation Plan

Update to the Kittiwake Letter of Application from the Cayman Islands Department of Transportation, MARAD, dated November 5th, 2006
Updated January 23, 2008

May 1, 2007

This document is an update to the Kittiwake Reefing Plan and application to MARAD for the donation/transfer of a ship for artificial reefing purposes to the Cayman Islands.

Kittiwake Paint Test Results: Original Batch of 121 Samples
May 17, 2006
Universal Laboratories, Hampton, VA

Of the 121 paint samples that were taken on the Kittiwake from the above reference paint sampling batch, 106 of the samples show no Aroclor 1262 registered, 14 of the samples show Arcolor 1262 contents of acceptable limits of between 1.0 and 19.0ppm, with the majority in ranges of 1.0 to 3.0ppm.

One sample indicated a concentration level of 108ppm of Arcolor 1262. This is referred to Sample #67. The sample was taken on the overhead, main propulsion, lower starboard side B-204-E Frame 79. The sample was white paint. Of the 121 samples taken, there were a total of 35 samples that were white paint, with none of the other white paint samples showed any Arcolor 1262. Other white paint samples were taken from the fan room, interior bulkheads, shaft alley, diving bulkhead, recompression chamber and overhead, bulkhead in welding, forward bulkhead including distribution compressor, lower main engine room, air compressor room, lower storeroom, electronics storeroom, bosuns lockers, overhead above the generator sets, overhead main propulsion, sonar room and main propulsion room. All white paint, including sample #67 is common, standard Navy white paint (150 or 151).

There were 10 paint samples from the main propulsion area, 1 foot from the hot sample area, 5 feet from the hot sample area, 8 feet from the hot sample area, 15 feet from the hot sample area, and continuing from there. All paint was of like color paint, and all other samples came up negative, with the highest concentration of PCB being 19 ppm. This makes the one sample (#67) an exception. Photo documentation is available on all samples taken.

Kittiwake Paint Test results: Second Batch of 2 samples
April 10, 2007
Severn Trent STL, Pittsburg, PA

Due to the concentration of Arcolor 1262 found in Batch 1 sample #67, a second batch of paint samples were taken in the same vicinity as sample #67 was found. The results of both of these samples (001 and 002 - lab report attached) shows an even higher concentration level of Arcolor 1262 of 3,400,000 ug/kg (equivalent to 3,400ppm). This data would indicate that the original sample #67 was at the outskirts or edge of the contaminated area, and that the second batch of re-sampling has found the core of the contaminated area.

Proposed plan for remediation:

As these two most recent samples were just an expanded sampling of the same site as sample #67 from the original batch (enlarged sample), we have obviously sampled right into the real hot spot. Since we have already sampled all around this area, that being the overhead, main propulsion, lower starboard side B-204-E Frame 79 and surrounding area, we know that the area is very limited in size. The following is a list of other paint samples that were taken in the vicinity of Sample #67, in the original batch of 121 paint samples:

Paint Samples in proximity to sample #67:

67, overhead frame, above oily waste transfer pump, starboard side of engine room

#116, 3’ forward of #67, on the same overhead frame

#113, 4’ below and aft of #67, on towing machine motor generator (MG) frame

#69, 11’ aft and inboard, sample on aft bulkhead of engine room

#112, 7’ forward and below #67, on horizontal frame

#68, starboard base of reduction gear, 12’ to the port of, and below, sample #67

#65, 9’ forward of #67 on fire main

#111, overhead frame, forward and to the port side, 11’ from #67

#114, port side overhead frame to match #67, but on the opposite side of the engine room

#70, base of generator, next deck up (above site #67), 5’ forward

#118, next deck up, forward bulkhead, starboard side

As noted above, the type and color of paint (white) that was sampled is the typical paint used throughout the ship, and there were not any other concentrations of Arcolor 1262 pcb's in the white or any other color paint. This would indicate that it is an isolated hot spot and we would speculate that this contamination was most likely caused by some form of leaching of something that has since been removed, rather than being inherent in the original paint itself. We speculate, as an educated guess, that there was something on the deck above, that would have dripped down and pooled on the beam from above as it is not a sealed deck above. The other probability would be the piping right next to the contaminated area. There is a union (a fitting that connects two pieces of pipe together) right next to the hot area, that could have been spraying or leaking onto the beam. Also, there is an older generator (3-268A Cleveland) that were notoriously leaky that is in parts on the deck above, which could have been a potential contamination source for the beam below. We sampled the paint directly adjacent to the generator and found no contamination that exists at this time. We offer this dialogue as potential causes for the contamination area.

Our remediation plan is to remove all metal and paint (everything) from the affected area, instead of just removing the paint. The effected area is in the engine room, on the underside of the deck, between the upper and lower engine room. The area is on the starboard side within the watertight space, but does not make up any part of the watertight shell, and removing the steel from this area would simply be a diver penetration or access and not affect the ship's water-tight integrity for towage or sinking. We have sampled the affected paint area until a clean or non-contaminated area in a 360 degree circumference of the contaminated area is found. We will remove all paint in this area making a clean margin, and then using a plasma cutter, we will cut out the metals and steel and dispose of the paint and steel as PCB contaminated materials.

Following remediation, Environmental Profiles (EPI) will perform the third party inspection, re-sampling and reporting on the effectiveness of the remediation plan.

Copies of all future lab analysis from the above paint sampling will be provided to the CI DOE, MARAD and the US EPA.

Yours truly;
Cayman Islands Tourism Association (CITA)

Nancy Easterbrook
Kittiwake Project Manager

1 345 946-5658

Kittiwake Paint Sample #67 – PCB Contamination area on the overhead

Attachment 2 – EPI PCB Risk Assessment Proposal

PROPOSAL

Evaluation of ex-USS Kittiwake (ASR-13) for the Presence of PCB's

EPI Proposal No. 2007080801-R5

Prepared for:
Ms. Nancy Easterbrook
Kittiwake Project Manager
Cayman Islands Tourism Association
Cayman Islands, BWI

18 January 2008

Prepared by:

EPI
813 Frederick Road
Baltimore, Maryland 21044
(410) 744-0700
(410) 744-2003 Fax
www.episervices.com

18 January 2008

Ms. Nancy Easterbrook
Kittiwake Project Manager
Cayman Islands Tourism Association
P.O. Box 31086 SMB
73 Lawrence Boulevard, Islander Complex
Grand Cayman, Cayman Islands, BWI

Re: Evaluation of the ex-USS Kittiwake (ASR-13) for the Presence of PCB's
EPI Proposal No. 2007080801-R5

Dear Ms. Easterbrook:

Pursuant to your request, EPI is pleased to provide this proposal to perform a post-remedial evaluation for the presence of PCB's aboard the referenced vessel. We understand that the evaluation will be performed subsequent to the remediation of shipboard locations where PCB's have either been identified or presumed in concentrations greater than 50 parts per million. We also understand that remediation activities will be performed and managed by other entities, and that such entities have demonstrated prior experience in performing remediation similar in size and scope to that anticipated aboard the ex-USS Kittiwake.

Background

Paint

Paint samples were collected in 2006 from 121 locations aboard the vessel and analyzed for PCB content. Laboratory analysis revealed that only one of the 121 paint samples contained PCB's in excess of 50 parts per million (ppm). This sample, #67, was located in Main Propulsion, lower STBD side, location B-204-E, Fr. 79. Subsequent sampling performed in the vicinity of #67 in 2007 also indicated PCB concentrations in excess of 50 ppm.

The Cayman Islands Tourism Association (CITA) has provided to the US Maritime Administration (MARAD) a plan to remediate the area on and adjacent to the surfaces where sample #67 in 2006 and subsequent samples in 2007 were obtained.

Suspected PCB Items and Articles

A complete visual inspection of the vessel will be performed to ascertain the presence of suspect PCB articles or materials, including but not limited to electrical components as per the list of such materials in the National Guidance; Best management Practices for Preparing Vessels Intended to Create Artificial Reefs (BMP Guidance) May 2006 (found at 71 FR 27716).

Purpose

The purpose of the work described in this proposal shall be:

- To perform post-remediation sampling for the presence of PCB's on and around the location of sample #67 and use the results of laboratory analysis to determine whether the remediation was successful.

- To obtain samples from coated surfaces at locations throughout the vessel for additional verification that such surfaces or surface coatings do not contain PCB's at concentrations greater than or equal to 50 ppm.

- Visually inspect the entire vessel to ascertain the presence of suspect PCB articles or materials.

SCOPE OF SERVICES

We propose to complete the third party evaluation as described above by means of five components; 1) document review, 2) sampling protocol development, 3) on-site inspection and sample collection, and 4) preparation of report of findings, and 5) final visual inspection. The details of each component are as follows:

Component 1: Document Review

Available documentation will be reviewed to determine the history of the vessel with respect to this reefing project. Documentation may include ship's plans, the PCB sampling plan, PCB inspection reports, PCB remediation plans, and PCB remediation reports.

Component 2: Sampling Protocol Development[1]

Based on the document review, an inspection strategy and sampling protocol will be developed for evaluating the effectiveness of vessel-wide PCB remediation. The protocol will specify information including but not limited to:

- The process for selecting the number of samples, sample locations, and, sample dimensions and sample size (if applicable),
- The process for selecting alternate sample locations,
- A diagram of proposed sampling locations,
- Decontamination process for re-usable sampling equipment,
- Waste and trash handling procedures,
- Field QA/QC procedures, including duplicates, splits, and blanks,
- The approved analytical method, and
- The criteria for classifying a sample result as a negative finding.

We understand that the sampling protocol may require review and/or approval by Government agencies, and that such review may be performed beyond the control of the CITA.

[1] This portion of the work has been completed. A copy of the sampling plan has been included as Attachment 1 to this proposal.

Component 3: Post Remediation Vessel Inspection and Sample Collection

Subsequent to vessel-wide PCB remediation, EPI will visually inspect the vessel and obtain bulk samples from painted surfaces throughout, as described in the Sampling Protocol (see Component 2 above). Particular emphasis will be placed on sampling for the presence of PCB's at and around the location of paint sample #67, which was previously identified as containing greater than 50 ppm PCB.

The exact number of samples to be collected from the vessel cannot be sufficiently determined at this time. However based on information presently available, we anticipate that approximately 120 - 130 sample locations will be utilized, and that at least six (6) bulk samples will be collected from around the identified PCB "hot spot" located in the machinery space. The bulk samples will then be forwarded to an accredited laboratory for analysis of PCB content. Extraction, analytical, and cleanup methods will be delineated in the Sampling Protocol.

The fees associated with Step 3 are based on two full-day site visits to the project site by two inspectors. Estimated fees also include travel-related expenses for two visits to the project site. Cost estimates for Step 3 do not include laboratory fees associated with sample analysis.

Component 4: Final Visual Inspection

Following successful post-remedial testing (as described in Items 1 through 3) above, a final, third-party visual inspection of the vessel will be performed. The scope of this visual inspection shall be to ascertain the presence of suspect PCB articles or materials as per the BMP Guidance document. If they are found, suspect PCB articles or materials will be identified by type and location and then inventoried for review. A report will be prepared detailing the procedures and findings of the inspection, along with recommendations for the client's consideration.

Component 5: Preparation of Report

A report of findings will be prepared upon receipt of test results. The report will detail the purpose, methods, findings, and conclusions of the visual inspection and bulk sampling. Copies of the final report will be provided to the EPA OSW for their use.

ITEMS NOT INCLUDED

1. Fees for the laboratory analysis of wipe samples and/or bulk samples.
2. Analysis of materials other than paint samples for the presence of PCB's.
3. Travel expenses to locations other than the anticipated mooring site of the vessel (Dominion Marine Shipyard, 425 Campostella Road, Norfolk, Virginia).
4. In-depth evaluation of complex environmental issues that were not initially communicated to EPI or are discovered after initiating the evaluation could require a change to the scope of services. EPI will identify any such issues and present them to the client before conducting any additional work.

CHANGES TO SCOPE OF SERVICES

Any changes requested to the scope of services above will be subject to cost renegotiation.

FEES AND PAYMENTS

Components 1 and 2: Doc. Review and Protocol Development . $1,560.00 Fixed Price

Component 3*: Vessel Inspection + Travel .....$15,755.00 Estimated

Component 4: Final Visual Inspection.....$7,250.00 Estimated

Component 5: Preparation of Final Report.....$3,560.00 Estimated

Total of Items 1, through 5 .....$28,215.00 Estimated

* Estimated fees for Step 3 do not include the cost of analysis for PCB wipe/bulk samples. The estimated cost of analysis for PCB wipe/bulk samples is $125.00/sample.

Travel time will be billed at ½ of the quoted hourly rate. All reimbursables, including but not limited to such items as travel expenses, reproductions, messenger services, telefacsimiles, long distance telephone calls, and applicable sales taxes, will be billed at cost. Subcontracted work, though not anticipated, will be billed at cost plus 10%. This proposal is based on current salaries and operational costs. If work under this proposal is not completed within six months from the date of the proposal, EPI reserves the right to adjust the fees to reflect current costs.

Our invoice will be based on the work completed at the following hourly rates for employees working on the project:

Principal/Certified Industrial Hygienist/Safety Professional $245.00/hour
Project Supervisor/Certified Industrial Hygienist.....$195.00-$245.00/hour
Project Manager/Industrial Hygiene Technician..... $145.00/hour
HSE (Health, Safety, and Environmental) Associate.....$95.00-$105.00/hour
Graphic/Photograph/Video/Administrative Support.....$55.00-$65.00/hour
Document Management $60.00/hour

While CITA shall be responsible for payment of services to EPI, the services being provided by EPI are for the legislative bodies of the Kittiwake Project, namely the Cayman Islands Department of the Environment, the US EPA, and MARAD. We understand the role of the CITA is solely to facilitate ship visits, liaise with legislators, and to approve contracts or make payments for services rendered.

PROJECT SCHEDULE

While no project timeline has been established, we understand that the scheduling of our work may be influenced by factors beyond our control. Notwithstanding, we shall make every effort to comply with delivery dates established by the client. The final report for the vessel evaluation will be completed within two weeks of receipt of final laboratory analysis.

RECORD RETENTION

EPI has no responsibility to retain any files, drawings or documents in connection with this project after one year from completion of project. At that time, all files, drawings, and documents may be destroyed unless requested by the client or the client's representative.

REFERENCES

We invite you to contact the following individuals who can attest to our experience and qualifications:

Stuart Perry
U.S. Environmental Protection Agency
TSCA Coordinator, Region III
Atlanta, GA
(404) 562-8980

Carolyn E. Junemann, Ph.D.
U.S. Department of Transportation, Maritime Administration
400 Seventh St. SW, Room 7209
Washington, DC 20590
Phone: (202) 366-1920

Spencer Slate
Captain Slate's Atlantis Dive Center
51 Garden Cove Drive
Key Largo, FL 33037
Phone: (305) 451-3020

LIMITATION OF LIABILITY

EPI's maximum obligation and/or liability to client, except insofar as EPI may be liable for its own negligent acts or those of its employees, for all claims, actions, damages or expenses arising out of, or in any way related to the provision of services under this agreement (including, but not limited to, an alleged breach of this agreement or an alleged breach or warranty) shall not exceed the total compensation due EPI under this proposal.

SUMMARY

If this proposal is satisfactory, please sign in the space provided and return one copy to our office. The terms of this proposal shall be null and void if not accepted with 30 days, unless officially extended in writing.

Sincerely,

Marc J. Plisko, CIH
Project Manager

MJP/mjp

ACCEPTANCE

The proposal description of professional services and terms are satisfactory and are hereby accepted. Authorization to proceed with the work is granted.

Company: _____

Name: _____

Title: _____

Signature: _____

Date: _____

Attachment 3 – EPI Paint Sampling Plan

PCB SAMPLING PLAN

Evaluate PCB Remediation Aboard USS Kittiwake (ASR-13)

EPI Project No. 27458

Prepared for:
Ms. Nancy Easterbrook
Kittiwake Project Manager
Cayman Islands Tourism Association
Cayman Islands, BWI

18 January 2008

Prepared by:

EPI
813 Frederick Road
Baltimore, Maryland 21228
(410) 744-0700
(410) 744-2003 Fax
www.episervices.com

PCB Sampling Plan
for
Ex-USS Kittiwake (ASR-13)

Environmental Profiles, Inc. (EPI) has developed this sampling plan for the ex-USS Kittiwake. The plan addresses comments in a letter from Ms. Laura Johnson, US EPA, Ocean and Coastal Protection Division, Marine Pollution Control Branch, dated August 10, 2007, which was submitted to the Cayman Islands Tourism Association (CITA). The letter from Ms. Johnson was submitted to CITA in response to the PCB remediation plan sent by CITA to the US Maritime Administration on May 1, 2007.

The CITA remediation plan described the results of a 2006 PCB survey aboard the vessel, which identified an area in the machinery space (B-204-E) as having surface PCB concentrations in excess of 50 parts per million (ppm). The CITA, through its agent, Dominion Marine Group, Ltd, has proposed to remediate the contamination by cutting and removing from the vessel all metal and paint from the affected area.

This plan sets forth the procedures to be followed for vessel-wide post-remedial sampling conducted pursuant to the remediation of surface PCB contamination previously identified aboard the vessel.

1.0 The Purpose and Objectives of the Sampling.

1.1 Paint samples shall be collected and analyzed for the purpose of evaluating the effectiveness of PCB remediation performed aboard the vessel, with emphasis placed on the remedial efforts performed in compartment B-204-E of the ex-USS Kittiwake (ASR-13).

1.2 The evaluation will be performed by means of sample collection using industry-accepted sample strategies and approved sampling and analytical methods.

2.0 Type(s) of samples to be collected.

2.1 Individual bulk samples of surface paint will be collected.

2.2 None of the bulk samples will be composited.

2.3 The paint samples will be obtained such that all painted layers at a particular sample location will be included in each sample.

3.0 Sample collection to verify remediation related to compartment B-204-E.

3.1 The statistical sample strategy will be based on guidelines published by the US EPA, and **may include relevant portions** of the following:

a) Compliance with Toxic Substances Control Act (TSCA) PCB Disposal Regulations: Sampling and Analyzing Paint on Metal Surfaces of Vessels Being Scrapped for Metal Recovery

b) Verification of PCB Spill Cleanup by Sampling and Analysis (OTS-1985)

c) Field Manual for Grid Sampling of PCB Spill Sites to Verify Cleanup (OTS-1986)

We understand the limitations associated with the preceding publications and acknowledge that they are not relevant or applicable to this project in their entirety. We intend to rely only on those portions that support the statistical methods presented in this outline.

3.2 The number of samples collected will be determined based on the size of the area remediated, with the locations laid out in a hexagonal grid and situated on the remaining surface adjacent to the edge of the removed surface(s).

3.3 The exact size of the area to be remediated has not been determined.

3.3.1 If the radius of the remediated area is less than 4-feet, then six paint samples will be taken (see Figure 1).

3.3.2 If the radius of the remediated area is greater than 4-feet but less than 10-feet, then 12 samples will be taken (see Figure 2).

3.3.3 While not anticipated, 18 samples will be taken if the remediated area is greater than 10-feet but less than 20-feet (see figure 3).

3.4 The sample dimensions will be 30 cm x 30 cm square, with the goal of obtaining a 50 gram sample; less mass may be obtained if deemed acceptable by the laboratory.

3.5 In the event a sample cannot be obtained from its proposed location, an alternate sample location will be selected. Alternate locations may be needed if, for example, a selected location is at a porthole, bulkhead opening, or otherwise not accessible.

3.6 The alternate sample location will be as close as feasible to the proposed sample location, at a distance equal or closer to the remediated area, but not further away.

3.7 A diagram of proposed sampling locations has been prepared for the sample strategies proposed in Items 3.3.1, 3.3.2, and 3.3.3 above.

3.7.1 Sample diagram based on a remediation area with a radius of less than 4-feet (see Figure 1).

3.7.2 Sample diagram based on a remediation area with a radius of more than 4-feet and less than 10-feet (see Figure 2).

3.7.3 Sample diagram based on a remediation area with a radius of more than 10-feet and less than 20-feet (see Figure 3).

3.8 Decontamination process for re-usable sampling equipment.

3.8.1 Re-usable sampling equipment will be cleaned and/or decontaminated to avoid cross-contamination between samples and/or sample locations.

3.8.2 The sampling equipment will be pre-cleaned before the site visit by rinsing with solvent and wiping the equipment down.

3.8.3 Equipment will also be cleaned with solvent between samples and then wiped with a single use, disposable towel.

4.0 Sample collection to ascertain the presence of PCB's in paint throughout the remainder of the vessel.

4.1 Sampling will be performed **based-in-part** on the statistical sampling strategies contained in the guidance document *Compliance with Toxic Substances Control Act (TSCA) PCB Disposal Regulations: Sampling and Analyzing Paint on Metal Surfaces of Vessels Being Scrapped for Metal Recovery*. The actual sample strategy presented below is more comprehensive than that presented in the preceding EPA publication. We understand the limitations associated with the preceding publication, and acknowledge that it is not relevant or applicable to this project in its entirety.

4.2 According to the vessel arrangement (BU SHIPS NO. ASR 13-S0103-671735), a total of 42 vessel compartments have been identified for sampling. The sum of these compartments, as well as exterior hull locations, comprise the scope of all rooms/compartments/areas that will be sampled. Additional compartments identified beyond the anticipated 42 will also be sampled according to the provisions of this plan. Specific sample locations are delineated in the following Sections 4.3 through 4.10.

4.3 Samples will be obtained from multiple exterior locations from each side of the ship hull.

4.4 Samples will be obtained from multiple locations on each level of the exterior of all decks above the main deck.

4.5 On every deck of the vessel, a sample will be collected from the overhead bulkhead, the deck itself, and the bulkhead of the corridor.

4.6 On every deck of the vessel, a sample will be collected from the overhead bulkhead, the deck itself, and the bulkhead of a living quarters compartment, office, or related area.

4.7 On every deck of the vessel, a sample will be collected from compartments used for the storage of ammunition, fuel, or other flammable materials. This may include machinery spaces, mechanical rooms, or engine spaces.

4.8 Individual samples will be taken from any bulkhead, overhead, or deck painted with colors or textures that are different than samples described above.

4.9 Individual samples will be obtained from limited use areas such as but not limited to storage lockers, utility spaces, and storeroom.

4.10 Individual samples will also be obtained from painted surfaces adjacent to mechanical systems such as the anchor windlass, towing winch, steering gear, and other rotating machinery. Additionally, samples will be obtained from command areas such as the bridge, radio room, radar/sonar room, chart room and other related space where electrical equipment was used. Such machinery could have utilized PCB-containing lubricating or hydraulic fluids in the past, which could have potentially leaked onto adjacent surfaces.

4.11 All samples will be collected using paint scrapers. Sample tools will be cleaned prior to collecting each sample.

4.12 Personnel collecting samples will use disposable rubber gloves, which will be changed between the collection of each sample.

4.13 Samples will be placed in either glass jars or manila envelopes. Each sample will be labeled with a unique sample number, along with the general sample location.

4.14 The sample size shall be an area measuring approximately 30 centimeters by 30 centimeters, and the depth of the sample will be from the painted surface to the bare metal substrate, with the goal of obtaining a 50 gram sample; less than 50 grams may be obtained if deemed appropriate by the laboratory.

4.15 All samples will be logged on a sampling form, and will include information such as vessel name, sample number, sample description/location, the sample date, and the name of person who collected the sample.

4.16 Each sample location will be marked with bright-colored spray paint and photo documented, with the photograph number corresponding to the uniquely assigned sample number.

5.0 Waste and trash handling procedures.

5.1 Waste generated from the sampling process, including but not limited to disposable gloves, towels, tools, discarded sample bags/containers, and other disposables will be placed into a bag designated for such purpose.

5.2 The materials will be retained until the sample results are available for review.

5.3 If all samples contain less than 50 ppm PCB, then the materials will be disposed of as trash.

5.4 If any samples contain greater than 50 ppm PCB, then the materials will be disposed of as contaminated waste.

6.0 Field QA/QC procedures, including blanks, duplicates, and splits.

6.1 Quality Control procedures will begin with the collection of the first sample.

6.2 Each sample will be logged on a sample form and shall include the sample number, sample location, date of collection, and the name of person collecting the sample (see Section 4.14).

6.3 A sample diagram, indicating the location and sample number, will be included.

6.4 The samples will be submitted to an accredited laboratory facility following chain-of-custody procedures. Chain of custody provides conclusive written proof that the samples were taken, transferred, prepared, and analyzed in an unbroken line as a means to maintain sample integrity.

6.5 Field blanks will be collected at a rate of 10% of the total number of paint samples taken, with a minimum of two blanks collected. The purpose of field blanks is to demonstrate that the sampling equipment has not been contaminated. If only two field blanks are taken, they will be taken before and after the field sampling has occurred. Additional blanks, if collected, will be obtained while the field sampling is in progress.

6.6 Duplicate samples will be collected from 10% of the sample locations, with a minimum of two duplicates collected.

6.7 No split samples are anticipated.

7.0 The approved analytical method(s) to be employed.

7.1 Analysis protocols will be selected from among those listed in the EPA SW-846 listings.

7.2 Based on the potential variety of Aroclor compounds present, we propose to use EPA Method SW-846 8082 with Soxhlet Extraction. Soxhlet extraction will be based on EPA's preferred method, which is SW-846 3540C, with extract cleanup performed based on SW-846 3600.

7.3 We propose to submit the samples to Clayton Group Services (Bureau Veritas) for analysis. This laboratory has prior documented experience performing PCB analysis with Soxhlet Extraction.

8.0 The criteria for classifying a sample result as a negative finding.

8.1 A result showing PCB content between Non-Detect and <50 ppm for ALL samples shall be considered a negative finding and indicative of an effective remediation, provided the limit of detection is < 50 ppm.

8.2 EPI will request that the analytical laboratory responsible for analyzing the bulk samples attain the lowest Limit of Detection feasible. Based on our previous experience, the LOD may be 25 ppm or less.

8.2 Any sample results showing a PCB content ≥50 ppm shall imply a positive finding, indicating the area has not been successfully remediated.

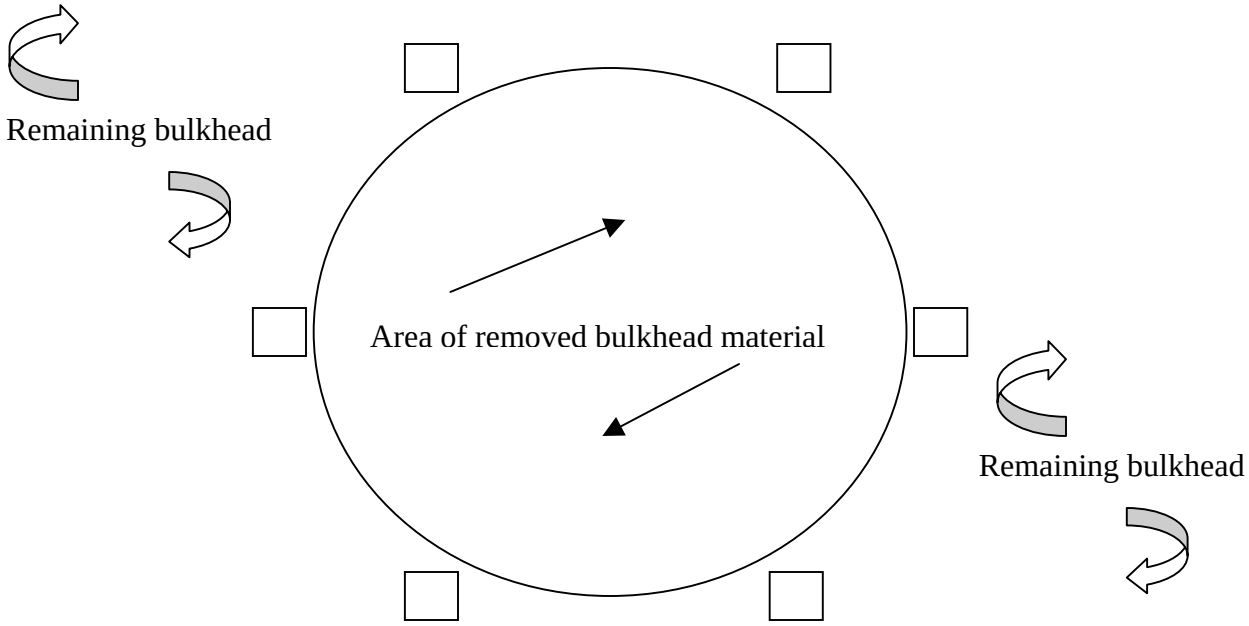


Figure 1. Location of sampling points in a 6-point grid where the outer boundary of the contaminated area is 4-feet or less from the center. The distance between adjacent sample points will be less than or equal to 0.87 times the radius of the contaminated area (0.87r).

= Sample location

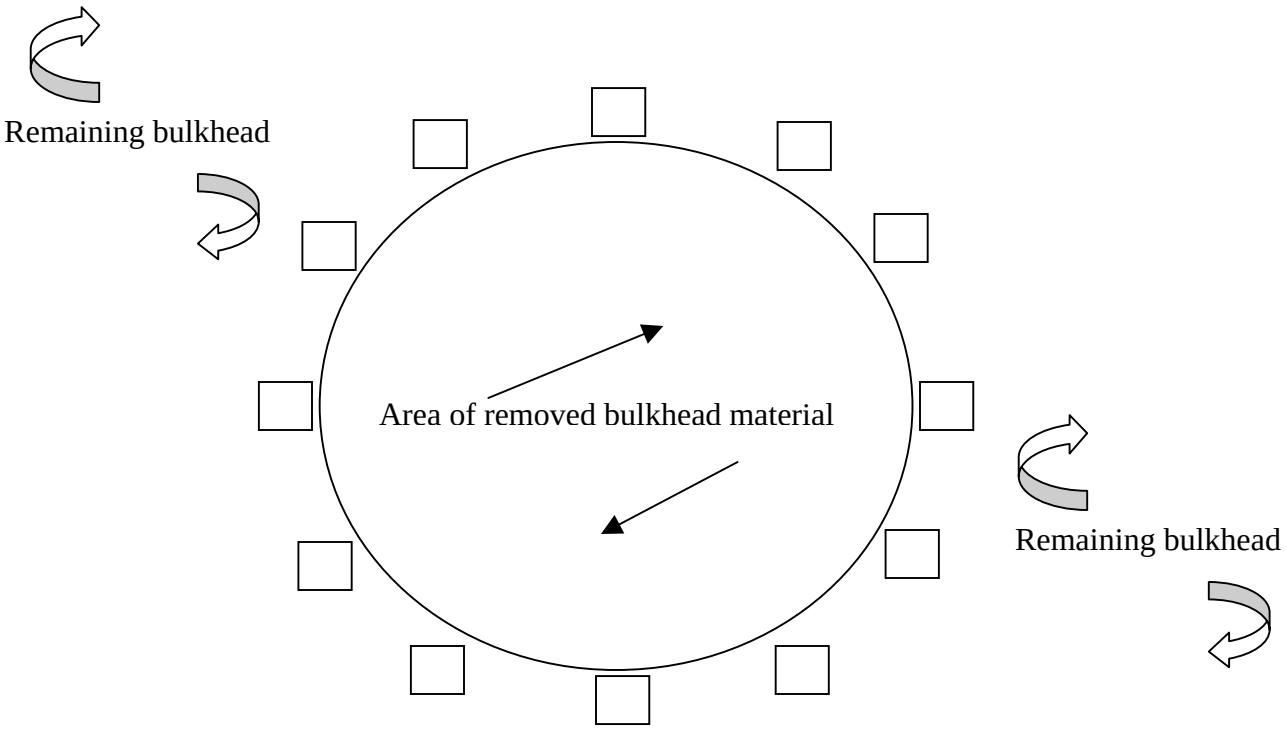


Figure 2. Location of sampling points in a 12-point grid where the outer boundary of the contaminated area is more than 4-feet but less than 10-feet from the center. The distance between adjacent sample points will be less than or equal to 0.48 times the radius of the contaminated area (0.48r).

= Sample location

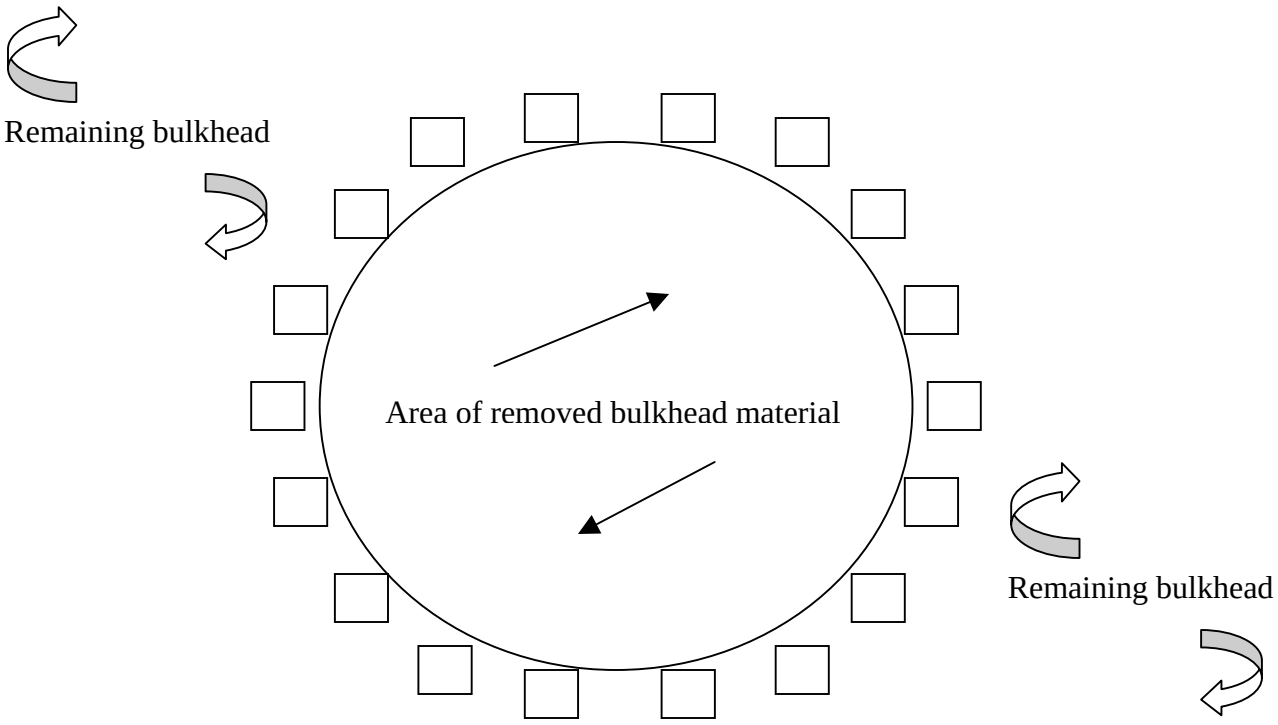


Figure 3. Location of sampling points in an 18-point grid where the outer boundary of the contaminated area is more than 10-feet but less than 20-feet from the center. The distance between adjacent sample points will be less than or equal to 0.30 times the radius of the contaminated area (0.30r).

= Sample location

Attachment 4 – Port Authority approval on the site selection for the Kittiwake

PORT AUTHORITY OF THE CAYMAN ISLANDS

PO Box 1358, Harbour Drive, Grand Cayman, Cayman Islands, British West Indies
(345) 949 2055, Fax (345) 949 5820

June 7, 2007

Mrs. Gloria McField-Nixon
Permanent Secretary
Ministry of Tourism, Environment, Development & Commerce
Glass House

Dear Mrs. McField-Nixon

Re: Proposed site for the sinking of the vessel Kittiwake

I have received correspondence from Nancy Easterbrook CITA- Kittiwake, Project Manager, asking that the Port Authority formally confirm to the Ministry that we are in agreement with the location identified as Lat 19 21.714N and Long 81 24.073W for sinking of the Kittiwake.

The Port Authority has no issues with having the Kittiwake sunk at this location.

Yours Sincerely,

Paul Hurlston

Paul W. Hurlston
Port Director

cc. Nancy Easterbrook CITA – Kittiwake, Project Manager

Attachment 5 – Bay Bridge Scrapping Letter / Contingency Plan

BAY BRIDGE ENTERPRISES, LLC

P.O. Box 7596 • Chesapeake, VA 23324-0596 • Phone: (757) 543-7464 • Fax: (757) 543-2424

Nancy Easterbrook
Project Coordinator
Cayman Islands
Tourism Association

RE: Ex – USS Kittiwake

Mrs. Easterbrook

If permits can not be acquired for export and reefing of the Ex – USS Kittiwake, Bay Bridge Enterprises would be willing to accept this vessel for scrap metal post remediation.

Bay Bridge Enterprises is a MARAD certified ship dismantler in Chesapeake Virginia and is more than capable to handle this vessel. If have have any questions or would like to speak further on this matter, please call me at the below contact information.

Sincerely,

Marc McPherson
President
Bay Bridge Enterprises, LLC
Cell (757) 309-8066

Attachment 6 – Commonwealth of Virginia approval to clean the Kittiwake Hull in water

Guidelines for in-water hull cleaning

Letter to MARAD approving in-water hull cleaning in Virginia

COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY
TIDEWATER REGIONAL OFFICE
5636 Southern Boulevard, Virginia Beach, Virginia 23462
(757) 518-2000 Fax (757) 518-2103
www.deq.virginia.gov

L. Preston Bryant, Jr
Secretary of Natural Resources

David K. Paylor
Director

Francis L. Daniel
Regional Director

Ms. Nancy Easterbrook
Cayman Islands Tourism Association
P.O. Box 31435
Grand Cayman KY1 -1 206
Cayman Islands

September 7, 2007

Dear Ms Easterbrook:

Re: Kittiwake Reefing

This letter supersedes the letters of August 28 and 29, 2007, concerning the hull cleaning of the Kittiwake within the Hampton Roads harbor of Virginia.

Based on the information that you have supplied, the Department has no objection to the hull cleaning of the Kittiwake at DMG in Norfolk, Virginia. Normally it is our preference for these hulls to be cleaned as they are moored at the JRRF site in the James River due to the excellent flushing characteristics of that riverine system. This same characteristic is not true for the Eastern Branch of the Elizabeth River. Consequently, it is important for all practicable precautions to be taken in the performance of this work. This hull cleaning project should at a minimum follow the instructions for hull cleaning in the U.S. Coast Guard memo of December 27, 2006, titled Hull Fouling and Movement of MARAD NDRF Vessels and its accompanying Interim Guidance Criteria for Cleaning Hulls of MARAD Vessels Prior to Relocation. In addition, you may wish to read Naval Ship Manual, Chapter 081 (S9086 CQ-STM-010/CH081R4) and/or National Uniform Discharge Standards for Vessels. The above mentioned documents were supplied in my previous letter. MARAD has developed and uses a system for hull cleaning that catches much of the particulate that is generated. I would urge you to check with them and study their approach.

Please notify us when these activities will take place so that if there are citizen complaints we will be in a better position to reply to them. We wish you the best of luck on this reefing project. Please contact me if I can be of further assistance.

Sincerely,

Francis L. Daniel

Francis L. Daniel

DRAFT
Interim Criteria for Cleaning Hulls of MARAD Vessels Prior to Relocation for Disposal

Commandant (G-PSO-4)
U. S. Coast Guard

27 June 2006

1. BACKGROUND AND PURPOSE

.1 Coast Guard regulations intended to reduce the transport and introduction of non-indigenous organisms via fouling of ships' surfaces are described in 33 CFR 151, Subpart D section 2035 (5) and (6).

.2 Maritime Administration (MARAD) vessels that are intended to be disposed of through dismantling, reefing, or deep-sea disposal have often been lain up for considerable periods of time, with little or no hull maintenance or cleaning.

.3 Movement of such heavily fouled hulls between geographic locations constitutes a risk of introducing associated organisms to marine and estuarine habitats in U.S. waters where they do not naturally occur.

.4 MARAD is developing a comprehensive programmatic approach, in coordination with the Coast Guard, for minimizing the risks of translocating non-indigenous organisms when vessels must be moved for disposal.

.5 While the Programmatic Plan in (1.4) is being prepared, an interim approach to meeting the requirements of 33 CFR 151.2035(5) & (6) is required for uniform and consistent application to all obsolete MARAD vessels moved for disposal.

.6 These Criteria are intended to provide such consistent guidance for Coast Guard and MARAD personnel relative to actions taken to bring MARAD vessels into compliance with 33 CFR 151.2035.

.7 Actions and criteria may be added or modified over time, as appropriate and necessary.

2. DEFINED ACTIONS

.1 Hull Cleaning - the removal of biological fouling of the underwater hull, appendages, and openings of vessels by mechanical means using brushes, scrapers and similar tools. The purpose of underwater hull cleaning prior to relocation for disposal is to remove excessive biological fouling that has developed over long lay-up periods with little or no regular hull cleaning. The underwater cleaning process, therefore, should remove as much of the accumulated biological fouling as possible. However, given the poor condition of the hulls of some of the obsolete MARAD vessels slated for disposal, and the need to minimize the release of paint / coating residues, it is recognized that the cleaning operation will not remove all of the "hard" fouling. As an interim measure, it is expected that hull cleaning will be conducted in-water prior to the movement of the vessel.

.1 Full Cleaning - the cleaning of the entire underwater hull surface (i.e. painted surfaces), appendages, including propellers and shafts, and openings.

.2 Partial Cleaning - only discrete sections of the hull (e.g., forward one-third or forward two-thirds of the hull), appendages (e.g., rudders, sonar dome, fin stabilizers), and systems (e.g., masker air, hull openings) are cleaned. Partial cleanings may be conducted because the extent and distribution of fouling before movement of the vessel is not uniformly distributed over the entire hull or access for cleaning of the entire underwater hull is limited due to restrictive water depth or visibility. Under such circumstances, partial cleanings are a viable alternative to cleaning the entire hull and all the underwater components, but must be based on a vessel specific assessment that clearly documents the appropriateness of a partial cleaning.

Deleted: a

3. PROCEDURES AND EQUIPMENT

.1 In-water cleaning will be conducted by certified professional divers utilizing hand-held or self-propelled rotary brush equipment, water jets, hydrolance equipment, or other similar industry-recognized equipment.
.2 To minimize removal and release of paints and other coatings, or damage to the physical integrity of the hull, where brushes are used, brush materials will be polypropelene, nylon, or other similar non-metal abrading materials.
.3 In-water hull cleaning will be conducted in accordance with all applicable Federal, State and Local regulations and requirements.
.4 Pre-cleaning inspections by the divers will document the abundance, extent, and type of fouling. This information will be used to select the appropriate cleaning methods and equipment.
.5 Post-cleaning inspections by the divers will document the degree to which the fouling has been removed. At minimum, cleaning will remove all visible soft fouling recognizable as plants or animals. It is recognized that cleaning will not necessarily remove all hard (calcareous) fouling such as barnacles, mussels, calcareous tube worms, etc. However, selection of the cleaning equipment should be conducted so as to remove as much biological fouling as possible, taking into consideration the constraints posed by (3.2).
.6 Underwater color still or video photography will be used to document the nature of the fouling present before and after the cleaning. Where water clarity is poor, a clear-water housing will be used to provide a clear image of the hull and associated fouling. Representative images for before and after cleaning conditions will be included in the inspection documentation, for at least the following areas:

a. forward, mid and aft 1/3 sections of the vessel length, distributed to include near surface, mid-depth, and keel.
b. shaft, skeg, and rudder
c. hull penetrations, including areas around sea chests

.7 The lead diver or other responsible person associated with the divers will verify by signature that the pre- and post-cleaning inspection reports are accurate. Standard hull inspection data/report forms should be developed/used by MARAD for this purpose.

.8 A responsible MARAD party will sign and validate a document certifying that the hull inspection and cleaning activities were carried out.
.9 The diving team must maintain a daily log of the inspection and cleaning operations, to include:

a. Diver and Company Names
b. Cleaning operation dates and hours
c. Ship name
d. Type of cleaning
e. Type and quantity of personnel and equipment on scene
f. Notes on diving conditions, factors affecting the inspection and cleaning activities, and any other appropriate observations.

4. DOCUMENTATION

.1 The following documentation will be submitted to the Coast Guard in conjunction with requests for approval of dead ship tow plans:

a. Inspection and Cleaning Report, signed by the lead diver and a responsible MARAD representative, to include:
    a. Pre- (3.4) and post-cleaning (3.5) inspection reports signed by the lead diver
    b. Concise technical description of cleaning operations performed.
    c. Copies of Daily Dive Team logs (3.9), signed by the lead diver and a representative of MARAD

COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

Street address: 629 East Main Street, Richmond, Virginia 23219
Mailing address: P.O. Box 1105, Richmond, Virginia 23218
Fax (804) 698-4500 TDD (804) 698-4021
www.deq.virginia.gov

L. Preston Bryant, Jr.
Secretary of Natural Resources

David K. Paylor
Director

(804) 698-4000
1-800-592-5482

April 13, 2007

Ms. Elizabeth R. Megginson
Chief Counsel
U.S. Department of Transportation
Maritime Administration
400 Seventh St., S.W.
Washington, D.C. 20590

Dear Ms. Megginson:

Thank you for your letter of March 29, 2007, concerning removal and disposal of non-retention vessels from the James River Reserve Fleet (JRRF). Your letter directs itself to potential issues that might be associated with the resumption of the removal of such vessels, specifically, the removal of marine growth from the hulls that might contain invasive species.

As you are well aware, the Commonwealth is very concerned with the presence of so many non-retention vessels moored so close to the shipping channels in the James River. We applaud the progress that MARAD has made in disposing of these vessels in the immediate past years; however, the remaining vessels still pose a threat to Virginia waters, and it is important that MARAD continue its effort to remove them, including removing oil from any new non-retention vessels that are added to the JRRF.

With that in mind, the Commonwealth of Virginia wants to do everything reasonably possible to assist and encourage the federal government to continue disposing of these vessels in a manner that is economically feasible, yet still reasonably assures that the water quality of that segment of the James River is not impaired for future generations. Therefore, we encourage MARAD to continue its environmental stewardship by developing and implementing reasonable best management practices for hull cleaning activities. The Virginia Marine Resources Commission (VMRC) also has responsibilities in this area and concurs with this request. While it is not our intent to hold up further

progress in the removal and disposal of the vessels, we request that you provide a copy of such practices to DEQ and VMRC when complete. We are aware that the U.S. Coast Guard has issued a memorandum for such activities. In addition, you may wish to investigate:

Naval Ships Technical Manual, Chapter 081 (S9086-CQ-STM-010/CH-081R4)

National Uniform Discharge Standards for Vessels

Wherever practical and appropriate, we also encourage non-retention vessels having their hulls cleaned in VPDES-permitted dry-dock facilities. For example, it is our understanding that the *Vandenberg* will have its hull cleaned while in dry-dock. We realize that this was a decision made by government of the state of Florida, but our point is that it was an economically feasible approach under these circumstances.

It is not clear if the Clean Water Act covers hull cleaning activities at anchor, and Virginia does not have a VPDES permit that would address such activities. Therefore, we are not asking that MARAD apply for coverage of hull cleaning activities. If hull cleaning activities are planned in the future, please have the appropriate MARAD representative notify Frank Daniel, DEQ Tidewater Regional Director, and Bob Grabb, Chief, Habitat Management, at VMRC at (757) 247-2250 of the dates and duration of such activities. Additionally, DEQ and VMRC representatives may wish to observe hull cleaning activities from the surface, and I request that you work with them.

We appreciate the fine work that MARAD is doing to remove this threat from the James River, and we look forward to working with you in the future. I hope this letter has answered your questions. If you have further questions on this issue, please contact Frank Daniel at (757) 518-2171.

Sincerely,

David K. Paylor

DKP:dlm

cc: Frank Daniel – DEQ
Bob Grabb - VMRC

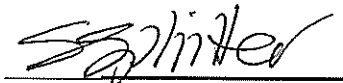
Attachment 7 – QA/QC reports on paint samples from Kittiwake 2006 (121 samples)

Quality Control PCB Surrogate and Spike Recovery Summary

Extracted: 5/15/2006
Extracted By: Raquel Castetter and Victoria Morsberger
Analyst: Victoria Morsberger
QC Batch: 060516025

UL Sample ID	TCMX	DCB	Aroclor1016%REC	Aroclor1260%REC	Unacceptable
ICV	102%	107%	110%	102%	0
Blank	90%	93%	NA	NA	0
LCS	86%	99%	102%	106%	0
0605231-001	85%	88%			0
0605231-002	104%	124%			0
0605231-003	89%	116%			0
0605231-004	88%	113%			0
0605231-005	91%	120%			0
0605231-006	84%	111%			0
0605231-007	86%	89%			0
0605231-008	100%	114%			0
MS	77%	94%	103%	110%	0
MSD	84%	102%	101%	109%	0

QC Surrogate Acceptance limits 50 – 150%REC. QC Spike Acceptance limits 70 – 130%REC.
LCS, MS, and MSD samples were spiked with both Aroclor1016 and Aroclor1260 at a concentration of 1000mg/Kg.
ICV and FCV standards were spiked with both Aroclor1016 and Aroclor1260 at a concentration of 2000mg/Kg.



Quality Director

8/17/07
Date

Quality Control PCB Surrogate and Spike Recovery Summary

Extracted: 5/18/2006
Extracted By: Victoria Morsberger
Analyst: Raquel Castetter
QC Batch: 060518019

UL Sample ID	TCMX	DCB	Aroclor1016%REC	Aroclor1260%REC	Unacceptable
ICV	100%	103%	100%	90%	0
Blank	74%	83%	NA	NA	0
LCS	90%	90%	94%	86%	0
0605231-009	68%	97%			0
0605231-010	84%	91%			0
0605231-011	108%	94%			0
0605231-012	88%	93%			0
0605231-013	74%	90%			0
0605231-014	83%	101%			0
0605231-015	70%	83%			0
0605231-016	83%	94%			0
0605231-017	78%	96%			0
0605231-018	80%	87%			0
0605231-019	90%	95%			0
0605231-020	86%	115%			0
0605231-021	86%	117%			0
0605231-022	87%	105%			0
Blank	100%	106%			0
LCS	99%	107%	107%	104%	0
0605231-023	96%	143%			0
0605231-024	88%	109%			0
0605231-025	92%	114%			0
0605231-026	94%	111%			0
0605231-027	90%	117%			0
0605231-028	94%	106%			0

UL Sample ID	TCMX	DCB	Aroclor1016%REC	Aroclor1260%REC	Unacceptable
0605231-029	88%	122%			0
0605231-030	84%	106%			0
0605231-031	83%	105%			0
0605231-032	89%	118%			0
0605231-033	84%	116%			0
0605231-033MS	82%	102%	119%	228%	1
0605231-033MSD	90%	116%	132%	246%	2
0605231-034	89%	140%			0
FCV	122%	152%	125%	119%	1

QC Surrogate Acceptance limits 50 – 150%REC. QC Spike Acceptance limits 70 – 130%REC.
LCS, MS, and MSD samples were spiked with both Aroclor1016 and Aroclor1260 at a concentration of 1000mg/Kg.
ICV and FCV standards were spiked with both Aroclor1016 and Aroclor1260 at a concentration of 2000mg/Kg.

SSpitzer 8/17/07

Quality Director Date

Quality Control PCB Surrogate and Spike Recovery Summary

Extracted: 5/18/2006
Extracted By: Victoria Morsberger
Analyst: Jeremy Kroon
QC Batch: 060518020

UL Sample ID	TCMX	DCB	Aroclor1016%REC	Aroclor1260%REC	Unacceptable
ICV	121%	132%	128%	122%	0
Blank	94%	107%	NA	NA	0
LCS	97%	108%	102%	101%	0
0605231-035	85%	116%			0
0605231-036	92%	114%			0
0605231-037	87%	114%			0
0605231-038	87%	120%			0
0605231-039	84%	110%			0
0605231-040	86%	111%			0
0605231-041	91%	111%			0
0605231-042	96%	113%			0
0605231-043	86%	117%			0
0605231-044	88%	131%			0
0605231-045	120%	117%			0
0605231-046	84%	106%			0
0605231-048	97%	115%			0
FCV	126%	133%	132%	128%	0

QC Surrogate Acceptance limits 50 – 150%REC. QC Spike Acceptance limits 70 – 130%REC.
LCS, MS, and MSD samples were spiked with both Aroclor1016 and Aroclor1260 at a concentration of 1000mg/Kg.
ICV and FCV standards were spiked with both Aroclor1016 and Aroclor1260 at a concentration of 2000mg/Kg.

SS Winter 8/17/07

Quality Director Date

Quality Control PCB Surrogate and Spike Recovery Summary

Extracted: 5/22/2006
Extracted By: Raquel Castetter and Jeremy Kroon
Analyst: Victoria Mosrberger
QC Batch: 060522008

UL Sample ID	TCMX	DCB	Aroclor1016%REC	Aroclor1260%REC	Unacceptable
ICV	110%	120%	117%	113%	0
Blank	91%	101%	NA	NA	0
LCS	111%	126%	125%	116%	0
0605231-047	88%	119%			0
0605231-049	91%	122%			0
0605231-050	94%	127%			0
0605231-051	96%	132%			0
0605231-052	87%	123%			0
0605231-053	94%	118%			0
0605231-054	98%	117%			0
0605231-055	98%	121%			0
0605231-056	101%	117%			0
0605231-057	93%	111%			0
0605231-058	98%	132%			0
0605231-059	95%	120%			0
0605231-060	96%	118%			0
0605231-061	93%	122%			0
FCV	111%	118%	114%	110%	0

QC Surrogate Acceptance limits 50 – 150%REC. QC Spike Acceptance limits 70 – 130%REC.
LCS, MS, and MSD samples were spiked with both Aroclor1016 and Aroclor1260 at a concentration of 1000mg/Kg.
ICV and FCV standards were spiked with both Aroclor1016 and Aroclor1260 at a concentration of 2000mg/Kg.

Sgdinner 8/17/07

Quality Director Date

Quality Control PCB Surrogate and Spike Recovery Summary

Extracted: 5/22/2006
Extracted By: Raquel Castetter and Jeremy Kroon
Analyst: Jeremy Kroon
QC Batch: 060524016

UL Sample ID	TCMX	DCB	Aroclor1016%REC	Aroclor1260%REC	Unacceptable
ICV	115%	122%	119%	117%	0
Blank	100%	113%	NA	NA	0
LCS	107%	120%	87%	90%	0
0605231-062	101%	114%			0
0605231-063	100%	120%			0
0605231-064	101%	121%			0
0605231-065	98%	129%			0
0605231-066	110%	129%			0
0605231-067	109%	129%			0
0605231-068	100%	122%			0
0605231-069	101%	127%			0
0605231-070	100%	123%			0
0605231-071	112%	135%			0
0605231-072	89%	114%			0
0605231-072MS	105%	123%	65%	75%	1
0605231-072MSD	109%	129%	48%	106%	1
FCV	117%	127%	123%	126%	0

QC Surrogate Acceptance limits 50 – 150%REC. QC Spike Acceptance limits 70 – 130%REC.
LCS, MS, and MSD samples were spiked with both Aroclor1016 and Aroclor1260 at a concentration of 1000mg/Kg.
ICV and FCV standards were spiked with both Aroclor1016 and Aroclor1260 at a concentration of 2000mg/Kg.

SSdinter 8/17/07

Quality Director Date

Attachment 8 – Lab Results – Paint sample Batch #2 (2 samples) April 2007

SEVERN TRENT STL

STL Pittsburgh
301 Alpha Drive
Pittsburgh, PA 15238

Tel: 412 963 7058 Fax: 412 963 2468
www.stl-inc.com

ANALYTICAL REPORT

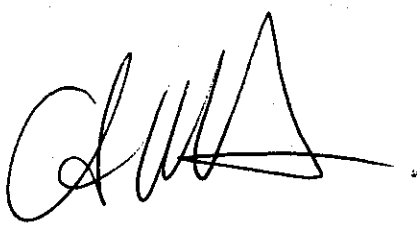
Kittiwake

Lot #: C7D070160

Tim Mullane

Dominion Marine Group
Box 152
Chincoteague, VA 23336

SEVERN TRENT LABORATORIES, INC.



Christina M. Kovitch
Project Manager

April 10, 2007

SEVERN TRENT STL

ACCREDITED IN ACCORDANCE WITH nelac

NELAC REPORTING:

The format and content of the attached report meets NELAC standards and guidelines except as noted in the narrative. The table below presents a summary of the certifications held by STL Pittsburgh. Our primary accreditation authority for the Non-potable water and Solid & Hazardous waste programs is Pennsylvania DEP. A more detailed parameter list is available upon request. Please ask your project manager for this information when required.

Certifying State/Program	Certificate #	Program Types	STL Pittsburgh
NFESC	NA	NAVY	X
USACE	NA	Corps of Engineers	X
US Dept of Agriculture	(#S-46425)	Foreign Soil Import Permit	X
Arkansas	(#03-022-1)	WW HW	X X
California – nelac	04224CA	WW HW	X X
Connecticut	(#PH-0688)	WW HW	X X
Florida – nelac	(#E87660)	WW HW	X X
Illinois – nelac	(#200005)	WW HW	X X
Kansas – nelac	(#E-10350)	WW HW	X X
Louisiana – nelac	(#93200)	WW HW	X X
New Hampshire – nelac	(#203002)	WW --	X --
New Jersey – nelac	(PA-005)	WW HW	X X
New York – nelac	(#11182)	WW HW	X X
North Carolina	(#434)	WW HW	X X
Ohio Vap	(#CL0063)	WW HW	X X
Pennsylvania - nelac	(#02-00416)	WW HW	X X
South Carolina	(#89014001)	WW HW	X X
Utah – nelac	(STLP)	WW HW	X X
West Virginia	(#142)	WW HW	X X
Wisconsin	998027800	WW HW	X X

The codes utilized for program types are described below:

HW	Hazardous Waste certification
WW	Non-potable Water and/or Wastewater certification
X	Laboratory has some form of certification under the specific program. Many states certify laboratories for specific parameters or tests within a category. The information in the table indicates the lab is certified in a general category of testing. Please contact the laboratory if parameter specific certification information is required.

Updated: 04/27/06

CASE NARRATIVE

Kittiwake

STL LOT #: C7D070160

Shipment:
Samples were received at STL Pittsburgh on April 7, 2007. The cooler was received within the proper temperature range.

If project specific QC was not required for samples contained in this report, when batch QC was completed on these samples, anomalous results will be discussed below.

PCBs:
Due to the concentration of AR1262 detected, the samples were analyzed at a dilution. The samples had the surrogates diluted out.

METHODS SUMMARY

C7D070160

PARAMETER	ANALYTICAL METHOD	PREPARATION METHOD
PCBs by SW-846 8082	SW846 8082	SW846 3541

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

C7D070160

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
JTJ27	001	67A	04/06/07	10:51
JTJ28	002	67B	04/06/07	10:51

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

C7D070160

Chain of Custody Record

SEVERN TRENT **STL®**

Severn Trent Laboratories, Inc.

STL-4124 (0901)

Client: DOMINION MARINE CREW	Project Manager: TIM MULLANE	Date: 4/6/07	Chain of Custody Number: 288607
Address: BOX 152	Telephone Number (Area Code)/Fax Number: 757 544 5614	Lab Number:	Page 1 of 1
City: CHINCOTEAGUE / State: VA / Zip Code: 23336	Site Contact:	Lab Contact:	
Project Name and Location (State): KITTIWAKE	Carrier/Waybill Number:		
Contract/Purchase Order/Quote No.			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Analysis: PCB	Special Instructions/ Conditions of Receipt
67 A	4/6/07	10:51				X	X						X	SOXLET 8082
67 B	4/6/07	10:51				X	X						X	SOXLET 8082

Possible Hazard Identification: ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other ASAP

QC Requirements (Specify):

	Date	Time		Date	Time
1. Relinquished By: TIM MULLANE	4/6/07	10:51	1. Received By: Amelia Kennedy	4/6/07	1051
2. Relinquished By: Amelia Kennedy	4/6/07	1600	2. Received By:		
3. Relinquished By:			3. Received By: Patrick R Sauer	4/7/07	0940

Comments: EMAIL RESULTS PLEASE TMULLANE@DOMINIONMARINE.NET

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

Cash in Advance / Prepaid Sales

Client Sample ID: 67A

GC Semivolatiles

Lot-Sample #...: C7D070160-001	**Work Order #...:** JTJ271AA	**Matrix.....:** SOLID
Date Sampled...: 04/06/07	**Date Received..:** 04/07/07	**MS Run #.....:**
Prep Date.....: 04/09/07	**Analysis Date..:** 04/10/07	
Prep Batch #...: 7099011	**Analysis Time..:** 07:52	
Dilution Factor: 2000		
% Moisture.....:	**Method.....:** SW846 8082	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	33000	ug/kg
Aroclor 1221	ND	33000	ug/kg
Aroclor 1232	ND	33000	ug/kg
Aroclor 1242	ND	33000	ug/kg
Aroclor 1248	ND	33000	ug/kg
Aroclor 1254	ND	33000	ug/kg
Aroclor 1260	ND	33000	ug/kg
Aroclor 1262	**3400000**	**33000**	**ug/kg**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	NC,DIL	(31 - 127)
Decachlorobiphenyl	NC,DIL	(23 - 141)

NOTE(S):

NC The recovery and/or RPD were not calculated.

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

Cash in Advance / Prepaid Sales

Client Sample ID: 67B

GC Semivolatiles

Lot-Sample #...:	C7D070160-002	**Work Order #...:**	JTJ281AA	**Matrix.....:**	SOLID
Date Sampled...:	04/06/07	**Date Received..:**	04/07/07	**MS Run #.....:**	
Prep Date.....:	04/09/07	**Analysis Date..:**	04/10/07		
Prep Batch #...:	7099011	**Analysis Time..:**	08:15		
Dilution Factor:	2000				
% Moisture.....:		**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	33000	ug/kg
Aroclor 1221	ND	33000	ug/kg
Aroclor 1232	ND	33000	ug/kg
Aroclor 1242	ND	33000	ug/kg
Aroclor 1248	ND	33000	ug/kg
Aroclor 1254	ND	33000	ug/kg
Aroclor 1260	ND	33000	ug/kg
Aroclor 1262	**3400000**	**33000**	**ug/kg**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	NC,DIL	(31 - 127)
Decachlorobiphenyl	NC,DIL	(23 - 141)

NOTE(S):

NC The recovery and/or RPD were not calculated.

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: C7D070160 **Work Order #...:** JTJ7F1AA **Matrix.....:** SOLID
MB Lot-Sample #: C7D090000-011

Prep Date.....: 04/09/07 **Analysis Time..:** 08:38
Analysis Date..: 04/10/07 **Prep Batch #...:** 7099011
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Aroclor 1016	ND	17	ug/kg	SW846 8082
Aroclor 1221	ND	17	ug/kg	SW846 8082
Aroclor 1232	ND	17	ug/kg	SW846 8082
Aroclor 1242	ND	17	ug/kg	SW846 8082
Aroclor 1248	ND	17	ug/kg	SW846 8082
Aroclor 1254	ND	17	ug/kg	SW846 8082
Aroclor 1260	ND	17	ug/kg	SW846 8082

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	93	(31 - 127)
Decachlorobiphenyl	94	(23 - 141)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: C7D070160 **Work Order #...:** JTJ7F1AC-LCS **Matrix.....:** SOLID
LCS Lot-Sample#: C7D090000-011 JTJ7F1AD-LCSD
Prep Date.....: 04/09/07 **Analysis Date..:** 04/09/07
Prep Batch #...: 7099011 **Analysis Time..:** 16:45
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Aroclor 1016	**81**	**(55 - 117)**			**SW846 8082**
	84	**(55 - 117)**	**4.4**	**(0-35)**	**SW846 8082**
Aroclor 1260	**86**	**(54 - 117)**			**SW846 8082**
	89	**(54 - 117)**	**3.1**	**(0-29)**	**SW846 8082**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	81	(31 - 127)
	86	(31 - 127)
Decachlorobiphenyl	96	(23 - 141)
	93	(23 - 141)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Attachment 9 – Souvenir items to be placed in boxes for export with the Kittiwake

Souvenir items that are to be saved for the CITA:

Telephone - Bridge
Depth sounder/Recorder - Bridge
All portals of copper or brass in decent condition - anywhere
Diving Locker Door – Diving Locker
Diving Locker Door Sign/plaque – Diving Locker
Rudder Key (Large) – Diving Locker
Shackles/Pulleys – Diving Locker
2 hatches/doors
Any non-florescent lights that must be removed
Charter / Plotter – Navigation Room
Electric Compass/Mileage – Navigation Room
Compass / Gyro
Starboard – rudder control box (outside)
Navigation lights (stern)
Brass handles and power cutout switches - Radio transmitter room
Helle Engineering Inc. chamber control box – Recompression chamber room
PSI Pressure Gauges (several) – Recompression chamber room
Several Gates Valves – Fire Suppression – forward of chamber room
Con Box – Laundry Room
Brass fuse/junction boxes – Sonar room
Telephone – Anchor/Chain storage (bow)
Telephone – Sick Bay
Telephone – Electronic Workshop
Bell on wall – Hospital chief room below decks
Gyro – Sperry Gyro Company MK14 – Gyro room, about waterline level
Brass telephone box and Call bell box – Gyro room
Loudspeaker – Electronic Workshop
2 Fuel Filters (yellow/black) – compressor room & propulsion room
Brass bells on wall – Engine room
Governor box – Engine Room
Call Bell – Propulsion Room
Klaxson – Propulsion Room (lower level)
2 Pressure Gauges - Lower deck tank storage bank racks
American Instrument Co. Oxygen Booster/Pump - Lower deck tank storage bank racks
Corblin (Paris) Membrane Compressor AOC250 – 1965 Serial #0383 - Lower deck tank storage bank rack
2 large spotlights – currently in Diving Locker area wrapped up
2 Signs “Sub Squad 6” – round – on top of smoke stack

Attachment 10 – Sinking Plan

Kittiwake Project
Vessel Disposal Plan

Wreck positioning & sinking plan

USS Kittiwake

Seven Mile Beach
Grand Cayman

West Indian Marine Group
West Indian Marine Ltd.

22nd December 2007

Vessel Disposal Plan

Sinking Plan & Wreck Positioning

1. Introductory Overview

West Indian Marine Ltd. present this document as their proposal for the sinking of the USS Kittiwake off Seven Mile Beach, inclusive of methodology for the vessel positioning and sinking of the vessel following the arrival of the vessel in Grand Cayman.

West Indian Marine Ltd. is a Caymanian owned and operated local company, specializing in the marine services of towing, salvage, rescue, ship assist, pilotage, tendering, marine contracting, dredging, dredge tendering, marine construction, artificial reefs, seawalls, moorings, docks, marinas, coastal shore protection and beach stabilization. West Indian Marine is the only local Caymanian Company that has both the marine expertise and the marine equipment in the Cayman Islands to carry out this project.

This vessel disposal/sinking plan is proposed, based on general information, photos and details provided in the invitation to tender document for the USS Kittiwake project together with inspection of the vessel in the USA at Norfolk, Virginia, and conversations with the managers of the project and the CIDOE. This proposal is also based on the vessel having full preparations completed in the shipyard which is contracted to carry out Phase I of the project tender, including but not limited to the installation of air vents and air vent holes, internal flooding ports and vent holes together with all internal diver access holes fitted. West Indian Marine would require detailed discussions and agreement with the managers of the project, following a pre-commencement inspection of the vessel in the USA concerning the extent of work to be done prior to the commencement of Phase 1 of the project. A pre-delivery inspection would also be required prior to towing the vessel to the Cayman Islands.

West Indian Marine Ltd's disposal plan includes towing, handling and delivery of the vessel from George Town Harbour including stand-by services, positioning and securing of the vessel off Seven Mile Beach and then the controlled sinking of the vessel at the site with the most environmentally safe disposal of the hull as is possible.

We are confident that we can position the vessel and carry out the controlled and accurate sinking of the hull taking every precaution to protect nearby coral reefs, adjacent coral beds and the marine environment in close proximity to the site off Seven Mile Beach.

2. Vessel Particulars

The USS Kittiwake 251 is a Submarine rescue / Submarine tender vessel. The vessel is a single screw Chanticleer Class Submarine Rescue Vessel commissioned for service in 1944. The vessel's structure is reported to be in good condition and all DB tanks are either ballast or fuel bunker tanks which have been reported as having all light marine diesel bunkers removed from these fuel tanks. The bow comprises of a lower forepeak ballast tank and an upper deck store with anchor chain lockers.

General particulars:

Length LOA	251.33ft
Length BP	Unknown
Breadth Moulded	42.0 ft
Depth Moulded	Unknown
Max Draft – SLL	16.0 ft
Tonnage LWT	Unknown
Tonnage DWT	2,045.00 tons
Gross Tonnage	Unknown
Net Tonnage	Unknown
Propulsion	Diesel Electric
Horsepower	3000 HP
Built	Moore, Savannah
Year of Build	1944
Call Sign	Unknown
IMO #	N.A.
Official #	Unknown
Class	US Navy

3. Current Status of the vessel.

The vessel is currently located at anchor, laid up in the James River Reserve Fleet at Norfolk, Virginia, USA.
Following official hand over of the vessel by MARAD to the Cayman Islands Government, it has been documented that the vessels cleaning, preparation and remediation work in accordance with Phase 1 of the project works will be carried out by Dominion Marine Group, who is in close proximity to the vessel's lay up location in Virginia. It is reported that Phase 1 of the project will include the removal of all fuel from the vessels double bottom fuel bunker storage tanks, and the fuel settling and fuel daily service tanks, together with all oil from the vessel's L.O. storage tanks and the vessel's main engine, generators, air and AC compressor crankcases and electrical transformers.

West Indian Marine have assumed in their tender response that the environment cleanup and preparation of the vessel including fuels, oils, lagging, PCBs, lead ballast, etc. etc. etc. will be fully and completely be carried out in Phase I of the project works, prior to the vessel departing US waters.

4. Prevailing weather conditions

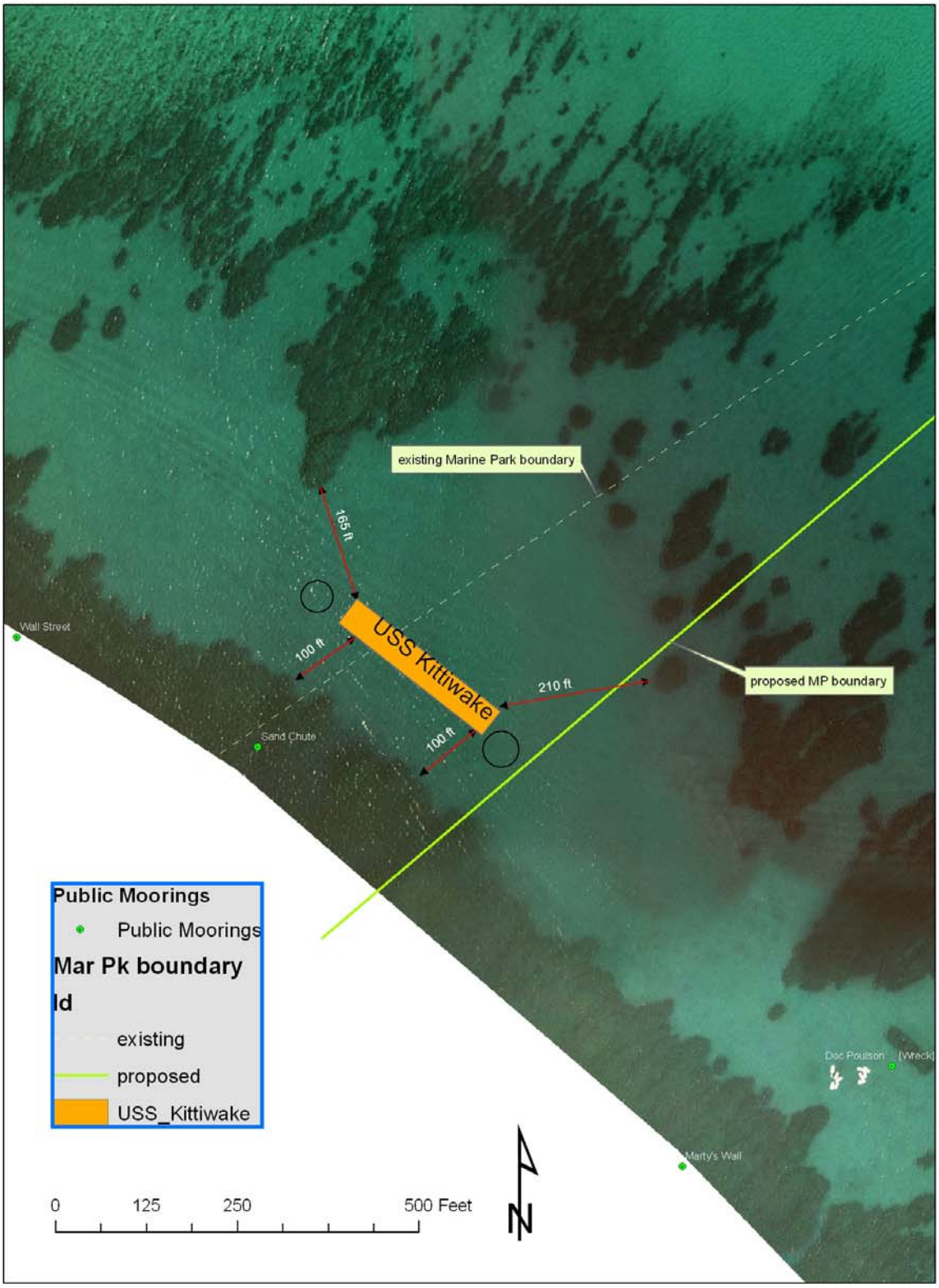
The sinking site is off Seven Mile Beach on the west coast of Grand Cayman in the lee of the normal prevailing easterly trade winds swinging between the NE to East to SE quadrant for most of the year. Adverse weather conditions generated by cold fronts moving from west to east out of the US/Mexican Gulf during the winter months from mid November to the end of April will affect the site during these months.

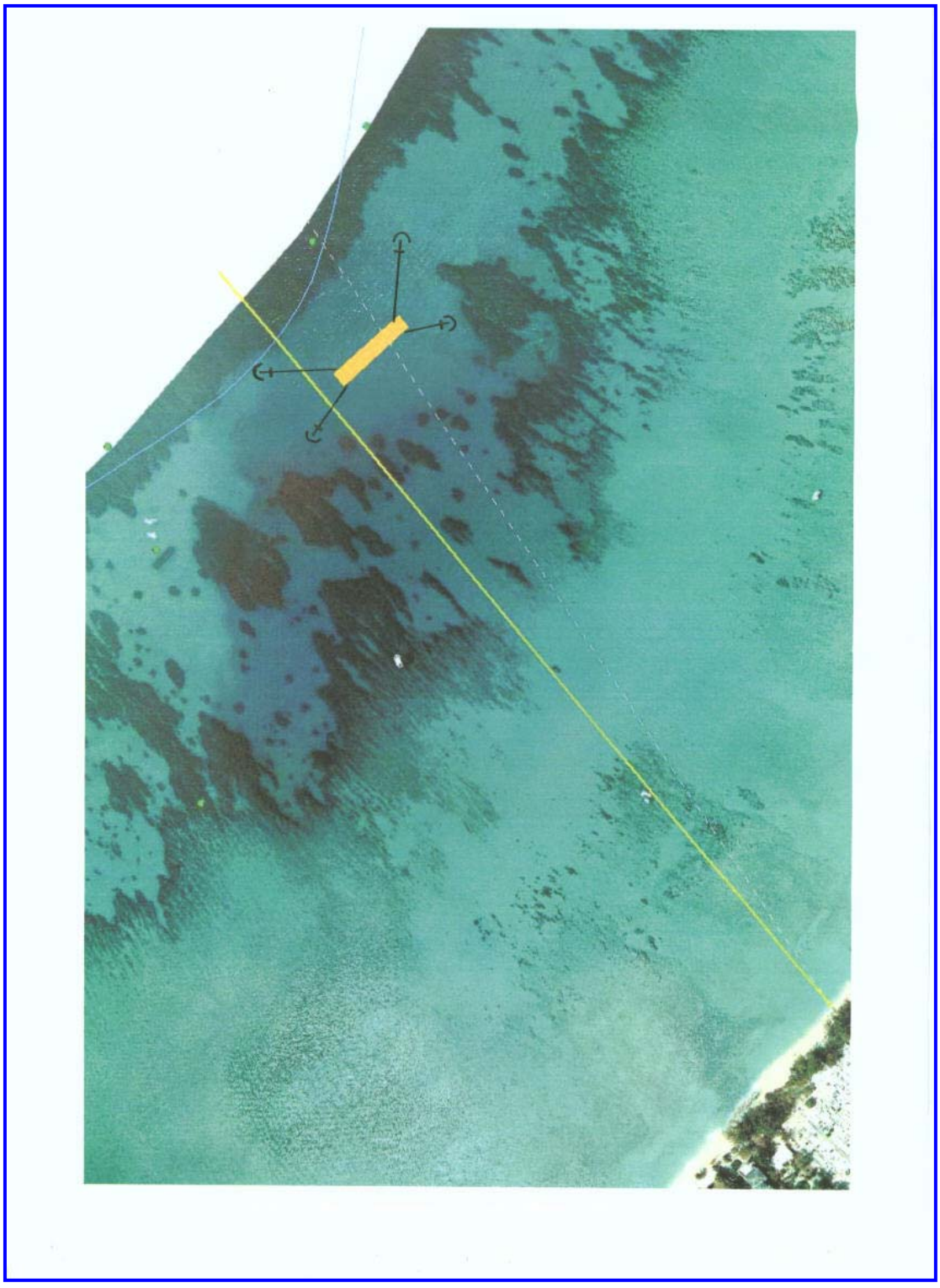
Adverse weather conditions can range from strong winds from the North through East quadrant or very high seas and strong winds from the Northwest to Northerly quadrant (commonly called Nor'westers). The annual hurricane season for the Caribbean Basin officially commences in June every year however hurricanes rarely affect the Western Caribbean until late August into September and through to November of each year.

The vessel's sinking site lays in an approximate north to south direction off the leeward side of Grand Cayman as designated and approved by the CIDOE and the Cayman Islands Port Authority and it is intended to sink the vessel with the bow pointing as close as possible to the north west and the stern towards the shore in a northwest to south easterly direction off Seven Mile Beach at the GPS coordinates of:

Latitude:	19 21.714'N	081 24.073W Bow
Longitude:	19 21.688'N	081 24.044W Stern
Sea Reference:	The site is located just off of the Sand Chute Dive Mooring	
Bottom Composition:	The area is very flat with a sand bottom	
Depths:	Stern: 56 feet	Bow: 64 feet

Proposed Site of Kittiwake Wreck





4-point Anchor positioning at the Kittiwake site

5. Technical Overview & Methodology

The exact location has been finalized and agreed, for the sinking of the vessel and considering the close proximity of the site to natural coral reefs and that it is located in a protected underwater marine park environment off Seven Mile Beach in Grand Cayman, Cayman Islands, West Indian Marine Ltd. have devised a sinking plan for the vessel utilizing a combination of controlled mechanical flooding and four point positioning and securing methodologies.

The proposed plan for sinking the vessel is based on the vessel's water tight integrity of the hull being maintained until the vessel is securely anchored into position at the site. The lower half of the vessel's hull will be water tight at all times, to maintain controlled flooding and the structural integrity of the hull after sinking. Diver access holes will be cut into the port and starboard top sides of the vessel's hull after the four point anchoring system has been deployed and secured. This allows for the controlled flooding of all compartments, spaces and tanks throughout the vessel, whilst maintaining control of the buoyancy, trim and heel of the vessel throughout the sinking operation.

Preparations would be made both in the USA during Phase 1 remediation before delivery of the vessel to Grand Cayman and prior to commencing the sinking operations in Grand Cayman.

Sinking operations will be carried out utilizing controlled tank and space flooding with portable mechanical pumps for the monitored varied flooding of the vessel. Pumps can be turned on and off as required in order to maintain the heel of the vessel and achieve a controlled sinking. Initially, all tanks and small compartment spaces throughout the entire length of the vessel will be flooded. These are characterized as small spaces that are more difficult to flood and predominantly on the lower decks and bottom hull area. Following all small spaces and tanks being flooded the large compartment spaces of the vessel will then be flooded. Effective flooding operations are directly related to preparations for the efficient venting and removal of air entrapment from all tanks and compartment spaces. Internal tank, space flooding and venting ports will be installed throughout the vessel in all bulkheads (except for 3 bulkheads which will remain intact for water tight integrity for towing) and deck levels in the USA during Phase 1 preparations, prior to towing the vessel to Grand Cayman, and inspected and approved by West Indian Marine prior to the vessel's tow from the USA to the Cayman Islands.

Attachment 1 shows the general arrangements of the Kittiwake on a deck by deck basis and the location of all air vents and diver cutouts in the vessel. (to be supplied)

Preliminary on-vessel walk through and discussions have taken place between West Indian Marine and Dominion Marine Group as to the general location of all internal venting ports, bulkhead cutouts and venting ports. A detailed vessel inspection will be conducted in Virginia at the Dominion Marine shipyard, following transfer of the vessel from MARAD to the Cayman Islands Government. At this time, the ship will be visually marked for all specific locations of all vents and diver access cutouts that West Indian Marine will need for sinking purposes, along

with stowage of anchors for the four point anchoring system of the vessel at the sinking site. Further documentation/schematics will be provided on this at that time to update this plan.

The vessel will be positioned afloat at the site secured by a fore and aft four (4) point anchoring system, and the following procedures would be carried out in due process. No work will commence on the sinking of the Kittiwake until the CITA has provided West Indian Marine with an approved Coastal Works Permit and Dumping Permit.

6. Work and preparation carried out in Grand Cayman.

a) The location of the initial preparation work (as defined below prior to the sinking at the site) will be alongside the North berth at the port in George Town. Failing approval from the Port Authority to berth at the port, the West Indian Marine Mooring in Georgetown Harbour will be used for the initial viewing and preparation work. In either event, a tug will be standing by the vessel at all times.

b) The removal of unnecessary equipment, spoils, debris and materials from the deck and compartments of the vessel will be carried out by crane and equipment on the tug/utility vessel MT Sand Cay and the construction spud barge Duck Pond Cay.

c) All debris and metal plating materials removed will be taken to the CI Dump and disposed of in a proper manner. This will be predominantly metal plates and cutouts.

d) Lower internal space flooding holes and upper air vent holes will be cut into each watertight bulkhead throughout the vessel allowing space to space flooding and air venting throughout the entire length of the vessel. All inter space or internal space to space flooding holes and air venting holes will be cut out or installed in the preparations during Phase 1 of the project in the USA. Three water tight bulkheads will remain sealed and water tight for the tow from the USA to Grand Cayman.

e) Unsealing and removal of the purpose fitted, flooding entries and air escape vents to all compartments and tanks will occur.

f) Deep Tank manhole covers will be removed, filled with seawater and replaced to prevent diver entry into those spaces, in preparation for flooding of those tanks.

g) Double Bottom tanks will be ballasted and pressed up with sea water with manhole covers remaining in place at all times.

h) Internal watertight bulkheads will be internally opened. Compartment diver access holes, internal flooding and air vent holes will be cut and installed as found necessary. Specific locations of these holes will be determined following the vessel remediation and

i) Diver access holes will be cut into the deck of the vessel as noted on the general arrangements, with one access hole at a minimum between each bulkhead, approximately 40 feet apart, both vertical and horizontal, along the deck, port and starboard. These access holes will also act as air vents to promote the quick escape of air from the internal compartments throughout the vessel. No dive access holes will be cut below waterline and access cutouts on the external hull will be approximately 1.0 meter above waterline.

j) Diver access and flooding holes cut on the exterior hull, once in position at the sinking site, will be cut on the lee side first, then the weather side, with time being of the essence once the cutouts are done close to the waterline.

k) No diver access holes will be cut into the port and starboard topsides of the vessel prior to towing and securing the vessel at the sinking site.

l) Mechanical filling of internal double bottom tanks with salt water whilst maintaining the level trim of the vessel will commence to remove the in hull buoyancy that empty double bottom tanks would provide.

m) General clean up of the vessel will be performed to remove all debris from the vessel prior to proceeding to the site for the sinking of the hull.

n) Any remaining bilge water inside the vessel will be vacuum extracted into a tanker truck prior to taking the vessel from the George Town dock (or West Indian Marine mooring) site to the sinking site.

o) A fire watch will be maintained at all times when hot work is in progress. Fire extinguishes will be available and on hand at all times.

p) Cutting will be accomplished using plasma cutters that provide clean cuts with no ragged edges, to minimize the fire potential and hot metal debris. All cutting will be done from the outside in, using the barge when appropriate as a working platform, so that the minimal debris created will be inside the ship and not external to the ship. This methodology will insure that neither metal plates nor cutouts external to the vessel will enter the water other than inside the ship. All large plates to be cut will have pad eyes welded onto them for handling and storage on the barge for disposal.

q) The barge will have a skip/container for temporary storage of all metal/debris removal.

r) Preparations of the vessel alongside the dock in George Town are expected to take two to three days. However no preparation work will be able to commence until all social

activities and events following the arrival of the vessel in George Town are completed and the public is restricted from being onboard or visiting the vessel.

7. Vessel towed to the sinking site off Seven Mile Beach

a) Vessel's bow and stern anchors and chain will be ranged out and positioned from the bow and stern of the vessel at the site to provide a secure four point anchoring of the vessel at the site. This will prevent vessel drift and movement together with ensuring the accuracy of the sinking of the vessel.

b) Anchors will be carefully positioned using air lift bags to safely move and locate anchors thereby eliminating the practice or need to drag anchors across the sea bed into the desired locations for these moorings.

c) Four anchors and chain will be ranged out and secured to the vessel fore and aft, two from the bow and two from the stern, all having chain ranged out as much as possible to prevent any deviation from the required sinking location at the site. The four point anchoring system also provides stability to the hull during the flooding process by limiting fore and aft trim variations and restricting some degree of heel during the sinking of the hull.

d) External cutting of the port and starboard topsides of the vessel's hull above the waterline will be carried out to install 1.5 metre diameter diver access holes in designated positions along the topsides of the hull to provide diver access to all compartments (except double bottom tanks) in the vessel after sinking. Diver access holes will be cut at the same levels of no less than 1.0 metre above the waterline along the hull sides. Cutting of all port and starboard topside diver access holes will be carried out at the sinking site following the installation, positioning and securing of the four point anchoring system on the vessel.

e) Compartment space and tank flooding, utilizing both controlled gravity and mechanical pump flooding will occur. Mechanical flooding will be stopped and started as required to ensure the controlled and level flooding and good trim of the vessel at all times. Flooding will be effected by the use of multiple 3" and 4" portable (eight 8) pumps (with an additional two 2 spare pumps for stand-by) with maximum discharge rates of 350 – 550 gpm will be monitored with discharge rates varied by personnel at all times. Estimated flooding rates will be 168,000 gph or the equivalent of 840 tons per hour. The vessel's sea cocks and internal flooding valves will not be used, as access to these valves are sometimes restricted in the flooding process which can prevent accurate and controlled flooding of the hull at a limited area site such as the site chosen for this vessel.

f) It is estimated that the sinking time for the vessel, once flooding has started, will be between 4 to 6 hours.

g) Preparations at the sinking at the site are expected to be two days in duration from arrival at the sinking site to having the vessel sunk and sitting on the sea bed at the site.

h) The Port Authority's two port patrol boats and personnel will be engaged to control and police marine traffic and the public around the vessel, while sinking operations are underway at the sinking site.

i) **IMPORTANT:** - It is important to note in the review of this sinking plan that the vessel's original hydrostatics, original inclining experiment results and general in service stability data and calculations can not be considered in this case as they have become redundant due to the project preparations of opening the vessels internal water tight bulkheads, tanks and hull top sides with large diver access holes cut into the structure for recreational scuba diving access as a dive site, following the sinking of the vessel at the site.

j) Three tender/work boats, the tug/utility vessel MT Sand Cay and the construction spud barge Duck Pond Cay will standby the vessel during the flooding process to ensure the continuous and accurate, controlled flooding of the vessel. Each vessel will utilize mechanical pumping to fill the largest compartments of the vessel with the internal flooding of the smaller compartments achieved through internal inter-compartment flooding and venting holes having been pre-installed prior to the flooding process. Stand-by vessels and equipment will not be attached to the vessel in any way during the sinking process. All vessels will be operational, manned and on engines maintaining position pressing against the hull of the vessel until required to pull back as the vessel sinks.

k) All flooding hoses will not be attached to the vessel in any way during the flooding process and will penetrate loosely into the hull through large diver access holes only. Length of hose inside the vessel will be no more than a maximum of 1.0m of hose length and will be able to be removed quickly as the vessel's hull sinks under its own flooded weight.

l) Continuous communications via VHF radios and cell phones will be maintained at all times during all facets of the preparations and sinking processes. VHF channel 12 will be the operating channel for all communications during the sinking of the vessel.

m) The precautions taken and the additional efforts engaged using a secured four point anchoring system in this sinking plan ensure that the vessel cannot move or drift from the site to endanger or damage the surrounding marine environment during the flooding and sinking process of this project. Four tensioned anchor chains attached to the vessel floating at the site will allow only an estimated maximum of 9.0m to 12.0m drift of the hull's final resting position on the sea bottom at the site.

n) It is expected that there may be a very slight sheen on the water directly after sinking from possible petroleum residue however any surface sheen resulting from the sinking

would be no where near the extent of surface sheen on the water after rainfall washes off the George Town dock in GT Harbour. If any sheen, it will be light fuel/oil, not heavy oils, that will quickly dissipate.

o) Following the completion of the flooding and sinking of the vessel onto the sea bed at the site, all four anchors securing the vessel will be re-tensioned using the tug/utility vessel MT Sand Cay to set the anchors into their final positions to secure the vessel under a tensioned four point anchoring system. Should there be insufficient room to tension the moorings by line directly to the tug then air lift bags will be utilized to assist in the moving and tensioning of the anchors. Some curve will be retained in each anchor chain attached to the vessel to handle high shock loads under tension during storm or hurricane events.

p) Final inspection of the vessel will be carried out after the sinking operations have been completed to ensure that the hull is safe for recreational diver access. A further day would be required to carry out this full and final safety inspection and the securing of any loose items found prior to clearing the wreck for public recreational diving access at the site.

q) During the final inspection of the vessel and simultaneous to the inspection, four (4) dive/snorkel boat moorings will be installed by CIDOE and 1 Navigational Marker will be installed by the Port Authority. Pre-welded secure pad eyes for the connection of these moorings will be installed on the vessel during phase 1 of the vessel preparation in the USA, with shackles, lines and mooring balls/navigational markers prepared in advance to install once the vessel is cleared for safe access. West Indian Marine is available and capable of installing these under separate contract, should the CIDOE or Port Authority wish this to be done.

8. Towage / Utility - Stand-by vessel operations

Simultaneous to the above sinking methodology, West Indian Marine would position our tug/utility vessel to stand-by amidships at the vessel to maintain position and stability during the flooding operations. The West Indian Marine tender/work vessels would also maintain positioning of the vessel fore and aft during the flooding process and provide mechanical pumping of sea water for flooding spaces on the vessel.

Water pumps will remain working and or be available onboard the West Indian Marine barge anchored adjacent to the vessel during the flooding and sinking of the vessel.

Once the vessel has sunk into position, the securing anchors would be repositioned and ranged out with anchors and chains tensioned. The West Indian Marine vessels and equipment would remain on site following the sinking of the vessel to monitor and inspect the vessel after the bedding in process and final securing of the vessel has been completed.

Should assessment of the vessel after inspection following the sinking conclude that additional venting of small trapped air pockets is required, West Indian Marine will evacuate these small pockets of air found after sinking.

9. Mobilization

West Indian Marine Ltd. will mobilize one shallow draft salvage tug/utility supply vessel with a hydraulic crane and a hydraulic A-frame gantry, capable of anchor handling and equipment handling, together with support equipment including a 60ft x 24ft equipment spud barge and three small line tender workboats.

An extensive array of diving equipment, portable salvage equipment, including but not limited to generators, pumps, diesel driven, lighting towers, pontoon lift bags, welding machines, plasma cutters, mixed gas cutting, etc etc etc. will be mobilized.

10. Insurance and Indemnification

a) At all times during the course of this work effort, West Indian Marine will maintain adequate third party and worker liability insurance, with the Cayman Islands Tourism Association and the Cayman Islands Government listed as co-insured on the policy.

b) At all times during the course of the work effort, West Indian Marine will maintain total loss insurance for the vessel in the amount of $500,000. US.

c) West Indian Marine will use only qualified, licensed and insured personal for this project. Best efforts and rigorous monitoring will be used in all instances, but in no event will West Indian Marine be liable for damage to natural coral reefs except through acts of negligence.

11. Personnel – Sinking/salvage crew

Key personnel provided by West Indian Marine Ltd. have association with United Salvage previously of the Howard Smith Group which has been acquired by the Adsteam Group, and later by Svitzer. Both of these companies are International towage and salvage operators. West Indian Marine has alliances with Dominion Marine contracted to carry out Phase 1 of the project and Resolve Marine. The following personnel will form the core of the salvage crew required for the preparation, handling, positioning and sinking of this vessel at the site;

a) One salvage master – John MacKenzie; West Indian Marine Ltd.
b) One assistant salvage master/supervisor – On staff at WIM + Tim Mullane from Dominion Marine Group (work permit)

c) One salvage vessel master – On staff at WIM
d) Three salvage welder/cutter/mechanics – 1 on staff at WIM with 2 local sub-contractors
e) Three salvage divers/mechanics/crew – On staff at WIM – commercial divers
f) Two general salvage hands/crew – On staff at WIM

Resumes for John MacKenzie and Tim Mullane have been provided. Additional staff used will insure that the appropriate qualifications for the job at hand are met. The CITA will be responsible for the work permit for the single (1) staff member brought in from off island from Dominion Marine who is the contractor carrying out Phase 1 & 2 of this project. The above personnel are inclusive of the normal working compliment of crew onboard the salvage utility vessel.

12. Portable salvage equipment

The portable equipment provided below is included but not limited to the following;

a) 2 x Diesel driven welders and plasma cutters
b) 1 x Crane and lifting gear and rigging
c) 1 x Gas driven small generators
d) 10 x Gas driven centrifugal pumps (8 being operation and 2 for standby)
e) 4 x Electric submersible pumps
f) Assorted chain and cable pullers, cumalongs and lifting blocks
g) 2 x Hookah diving compressors
h) Diving gear
i) Underwater diver's communications
j) 10 x General VHF communications
k) 2 x Diesel driven lighting towers
l) Electrical portable flood lighting
m) 1 x large garbage skip container
n) Anchors, chain, buoys and assorted mooring equipment
o) Assorted ropes, wire slings, lashings and soft straps and lifting gear.
p) Sealing and patching materials including gasket materials, and sealing compounds.
q) Assortment of hand and power tools and equipment
r) Underwater Hydraulic power tools
s) Oil spill, pollution control and removal materials.
t) Gases, gasoline and diesel fuel.

13. Scope of Work

1. Initial survey & evaluation of vessel to ascertain current status & establish an update of the condition of the vessel following delivery to George Town

2. Organize and mobilize portable equipment, materials and supplies
3. Mobilize floating equipment
4. Mobilize salvage crew
5. Install safe moorings
6. Transfer equipment to the vessel
7. Prepare vessel for sinking/flooding
8. Range out vessel's anchors and chain
9. Clean up the vessel and remove equipment
10. Prepare vessel for sinking
11. Position tug to standby the vessel
12. Commence gravity and pump flooding of all spaces
13. Maintain stability of the vessel with reduced buoyancy
14. Stabilize and trim vessel with controlled flooding
15. Monitor sinking of the vessel onto sea bottom
16. Adjust and re-position all anchors fore and aft and tension all anchor chains for secure anchorage of wreck onto the sea bottom.
17. De-mobilize floating equipment, portable salvage equipment, salvage crew and personnel

14. Sinking Schedule

West Indian Marine will commence mobilization immediately upon 48 hours notice prior to the arrival of the vessel off George Town. West Indian Marine estimate that they will be onsite to commence sinking operations directly following the delivery of the vessel into Cayman waters.

Sinking operations are expected to be continuous and without delay, however some functions of the operation are expected to be re-scheduled subject to the prevailing weather conditions at the time. It is estimated that pre-sinking social events, pre-sinking preparations and inspections of the vessel will take no more than 10 days requiring tug and equipment standby. Preparations

prior to proceeding to the sinking site will take a full two to three days. Sinking operations at the site will take less than 2 days conditional on noted preparations being carried out in Phase I and dependant on the number of external hull "diver access" holes required to be cut above the water line of the vessel prior to sinking at the sinking site.

Phase I – Cleaning & Remediation – Not Applicable

Phase II – Towing and delivery – Not Applicable

Phase III – Sinking

Time Line Day >>	1	2	3	4	5	6	7	8	9	10	11
Kittiwake Arrival in Cayman											
Release US Tug Boat from service to WIM											
Berth or Anchor in Georgetown Port/Harbour											
Media/Public visitation											
Kittiwake Preparation work											
Tow to sinking Site											
Kittiwake Preparation work											
Sinking											
Inspections, clean up											
Installations of Moorings											
Open to Public											

15. Stand-by at sea off George Town

West Indian Marine in their bid for this portion of the work, shall stand by the vessel for the scope of work defined herein. However should the vessel have to be taken to sea under tug/tow at any time, the stand-by daily hire rate will be applied excluding fuel, with fuel cost being invoiced as an additional charge. Stand-by should not exceed more than 7 days of display, inspections and preparations.

16. Company Statement

West Indian Marine Ltd. is a Cayman Islands' based and registered company specializing in salvage, towage, marine services, marine construction and marine contracting. The company's work includes salvage, general towage, anchor handling, buoy handling, marine services, vessel assist work, ship tendering, marine construction, sheet piling, seawalls, marinas, docks, man made underwater reefs (Reef Balls), coastal shore protection, beach stabilization (ProTecTube), moorings, navigational aids and markers, and dredge tendering.

Principals and personnel employed by the company include persons possessing vast shipping and marine engineering experience, an ‘ex’ American Bureau of Shipping (ABS Class) surveyor, commercial divers, offshore oil industry saturation deep diver, vessel operators master mariners and salvage experts together with backup and support from Svitzer, Resolve and Dominion Marine.

West Indian Marine Ltd. submits this proposal as a single company submission with West Indian Marine as the sole contractor, however West Indian Marine have close working relationships with two other marine contractors in close proximity to the Cayman Islands. We are well connected in the western Caribbean and throughout the USA, Cayman Islands, and Honduras. We are both familiar and well versed in working in the area and especially around Cayman Islands waters.

West Indian Marine staff, personnel and labour can work in the Cayman Islands without restriction. The company works predominantly in coastal and inland waters, environmentally sensitive coastal marine locations, marine national parks, reserves, and around the protected coral reefs of the Cayman Islands.

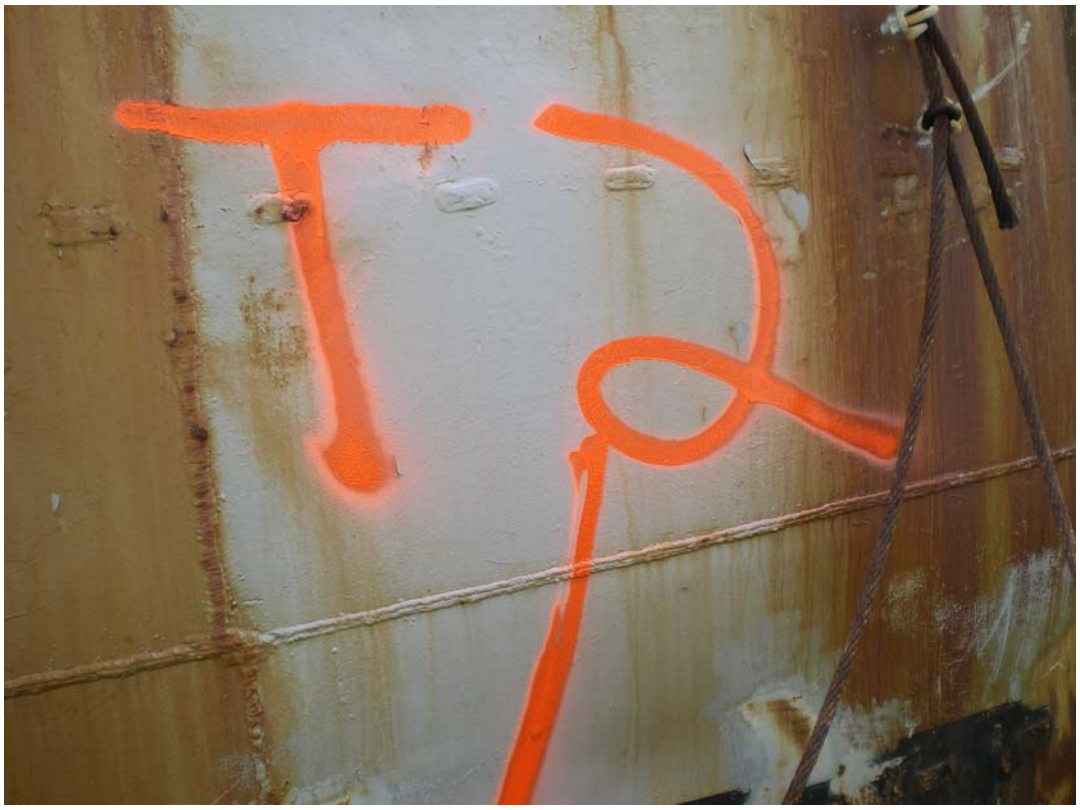
We trust you will find our “Sinking/Wreck Positioning Plan” for the USS Kittiwake satisfactory with every precaution considered. Should you have any questions or require further information and details about any aspect of our “Plan”, please do not hesitate to contact us and we will endeavour to assist you in any way we can.

Yours Sincerely,
West Indian Marine Ltd.

_____
John MacKenzie
Managing Director

Attachment 11 – Lab tests and photo documentation on anti fouling paint for TBT’s

Kittiwake – TBT Paint samples on the anti-fouling paint Sept 2007. The blue pieces of tape are to mark where original samples were. The sample site was extended for the two confirmatory samples and specifically tested for TBTs, in additional to PCBs.



TELEPHONE: (757) 865-0880
TOLL-FREE: (800) 685-2162
FAX: (757) 865-8614

UNIVERSAL LABORATORIES

20 Research Drive Hampton, Va 23666

REPORT OF ANALYSIS

Order ID: 0710469

(REPORT DATE)
18-Dec-07

TO: Dominion Marine
PO Box 152
Chincoteague VA 23336
ATTN: Tim Mullane

Project ID: Kittiwake
Project # N/A
Site: 1P
Matrix: Solid

UL Sample Number: 0710469-001
Sample ID: 1P
Grab Date/Time: 8/21/2007 10:38
Composite Start: N/A
Composite Stop: N/A
Collected By: CLIENT

Comments for Order: ***Please e-mail results to Tmullane@dominionmarine.net***

Parameter	Method	Test Result	Units	UL Report Limit	Analysis Date/Time	Analyst
TBT Tributyltin	GC/FPD	<	mg/Kg	0.5	11/19/2007	JA

Comments for Sample I 0710469-001
No comments

Respectfully Submitted,

Virginia Drinking Water Lab# 00030
VDEQ Lab #000003

North Carolina Drinking Water Lab # 51706
North Carolina Wastewater/Groundwater Lab # 543

EPA LAB CODE VA00012 0710469-001

TELEPHONE: (757) 865-0880
TOLL-FREE: (800) 695-2162
FAX: (757) 865-8014

UNIVERSAL LABORATORIES

20 Research Drive Hampton, Va 23666

REPORT OF ANALYSIS

Order ID: 0710469

(REPORT DATE)
18-Dec-07

TO: **Dominion Marine**
PO Box 152
Chincoteague VA 23336
ATTN: Tim Mullane

Project ID: Kittiwake
Project # N/A
Site: 1S
Matrix: Solid

UL Sample Number: 0710469-002
Sample ID: 1S
Grab Date/Time: 8/21/2007 10:56
Composite Start: N/A
Composite Stop: N/A
Collected By: CLIENT

Comments for Order: ***Please e-mail results to Tmullane@dominionmarine.net***

Parameter	Method	Test Result	Units	UL Report Limit	Analysis Date/Time	Analyst
TBT Tributyltin	GC/FPD	<	mg/Kg	0.5	12/19/2007	JA

Comments for Sample I 0710469-002
No comments

Respectfully Submitted,

Virginia Drinking Water Lab# 00030
VDEQ Lab #000003

North Carolina Drinking Water Lab # 51706
North Carolina Wastewater/Groundwater Lab # 543

EPA LAB CODE VA00912 0710469-002

Attachment 12 – Maintenance Plan

Maintenance & Management Program for the ex- USS Kittiwake "M&M Program"

1. OBJECTIVES:

The M&M program has been undertaken by the Cayman Islands Tourism Association (CITA) with the approval of and at the request of the Cayman Islands Government as one component in the overall Kittiwake Project. The M&M program is created to provide long-term monitoring, reporting and maintenance on the artificial reef/wreck. The intent of the program is to insure that the artificial reef/wreck is well maintained and monitored including several areas of concern and interest, namely:

1. On-going Diver, Snorkler and Submarine Safety
2. Debris Removal from time to time
3. On-going protection of the surrounding natural reefs
4. Boat safety for mooring and navigation
5. Statistical information on visitations/financial return on Investment to the tourism sector/Government versus investment

The CITA has taken a lease from the Cayman Islands Government (MOT) that commits the CITA to the M&M program during the term of the lease, in response to requirements from the Cayman Islands Department of the Environment (CIDOE). The CITA will provide the day to day Management and Maintenance on the Kittiwake.

In the past, no maintenance plans have been in place on any of the intentional or non-intentional wrecks that have been sunk, to insure that the wreck will continue to be maintained and cleaned. Natural forces of storms, surge, sand movement, hurricanes and normal deterioration will cause eventual damage to the Kittiwake with parts becoming loose or deteriorating causing debris or flotsam, over the anticipated 50+ year life span of the wreck. This program puts in place measures to maintain the artificial reef to mitigate causing or creating any damage to the natural reefs surrounding the Kittiwake and to maintain a safe wreck dive for boats, crew and visitors. Additionally, this program addresses the costs and management of dealing with the aforementioned should the wreck deteriorate and need to be removed from natural artificial reefs.

As a secondary objective, statistical information will be collected for use by partners in the Tourism Industry including both Government and Private Sector business members of the CITA. Information collected will assist the partners in the Kittiwake Project to evaluate the success of the wreck as an artificial reef, the financial return on our investment, information for consideration of any new/future wrecks and ecological references relative to the ships adaptation to the waters of Cayman.

It is safe to presume that once the maintenance program begins that new issues will be identified that will make the job easier and more efficient, resulting in a mutual agreement to revise the terms of the Maintenance Plan. The Maintenance Plan will form a section of a legally binding Coastal Works License and contract with CIG. It is proposed that the Maintenance Plan be reviewed at any time by the request of one of the parties to it or minimally every 2 years to review the plan and any updates that might be required to it based on experience or new needs as they are identified.

2. CONTACTS:

M&M Program Manager:
Ken Thompson, Executive Director
Cayman Islands Tourism Association (CITA)
PO Box 31086 SMB
73 Lawrence Boulevard, Islander Complex
Grand Cayman, Cayman Islands
(345) 949-8522 Phone
(345) 946-8522 Fax
(345) 324-0700 Cel
ken@cita.ky Email

CIDOE M&M Program Liaison:
Mr. Scott Slaybaugh, Assistant Director Operations
CI Department of Environment (CIDOE)
PO Box 486 GT
580 North Sound Road
Grand Cayman, Cayman Islands
(345) 949-8469 Phone
(345) 949-4020 Fax
Scott.Slaybaugh@gov.ky Email

Maritime Administration Liaison:
Mr. Shawn Ireland, Ship Disposal Office
Department of Transportation (MARAD)
Ship Disposal Program Office
MAR-610.3, Mail Drop #3
1200 New Jersey Avenue, SE
Washington, DC 20590-00001
(202) 366-5787 Phone
Shawn.Ireland@dot.gov Email

Cayman Islands Government:
Mr. Samuel Rose, Deputy Permanent Secretary
Ministry of Tourism, Environment, Investment & Commerce (CIG)
4th Floor, Government Administration Building
Georgetown, Grand Cayman
(345) 244-2458 Phone
(345) 945-1746
Samuel.Rose@gov.ky Email

Cayman Islands Port Authority:
Mr. Paul Hurlston, Director
CI Port Authority (PA)
Harbour Drive
Georgetown, Grand Cayman
(345) 949-2055 Phone
(345) 949-5820
phurlston@caymanport.com Email

or other such contact/personal information as may be updated from time to time in writing to all parties.

Ex-USS Kittiwake 251' Sub Rescue ASR-13:

Date: 2/10/2008

- Chanticleer Class Submarine Rescue Vessel
- Displacement: 2,045 tons (full load)
- Length: 251'4"
- Beam: 42' Draft: 16'
- Speed: 14.5 knots (max); 10 knots (econ)
- Armament: 2 3"/50 DP, 8 20mm, 4 DC tracks
- Complement:
- Diesel-electric engines, single screw, 3,000 h.p.
- Built at Moore, Savannah and commissioned 1944

3. BACKGROUND on the USS KITTIWAKE:

The USS Kittiwake has been cleaned and remediated to the Cayman Islands Department of the Environment standards, which are based primarily on Environment Canada's *Clean-Up Guidelines for Ocean Disposal of Vessels* and the US EPA's *Best Management Practices for Preparing Vessels Intended to Create Artificial Reefs.* All Hazardous Materials and substances (HAZMAT) have been removed from the Kittiwake prior to her sinking, including asbestos, pcb's, toxic substances, oils, lubes, grease, black water, fuels, loose paint and the like. Hull cleaning was completed immediately prior to her departure from US waters to eliminate any invasive species being brought to Cayman waters.

Additionally, the majority of all loose flotsam, lagging, overhead wiring, carpet, floor tiles, exfoliating paint, thin sheet metal, crew cabin walls and other materials that would create either diver safety concerns or become loose debris once sunk, thereby creating environmental hazards to corals reefs and marine life and/or divers has been removed from the ship. However, some tiles, wood and the like still remain on-board. These items, and any breakage, tearing away, etc. of the wreck will need to be removed from the sinking site from time to time.

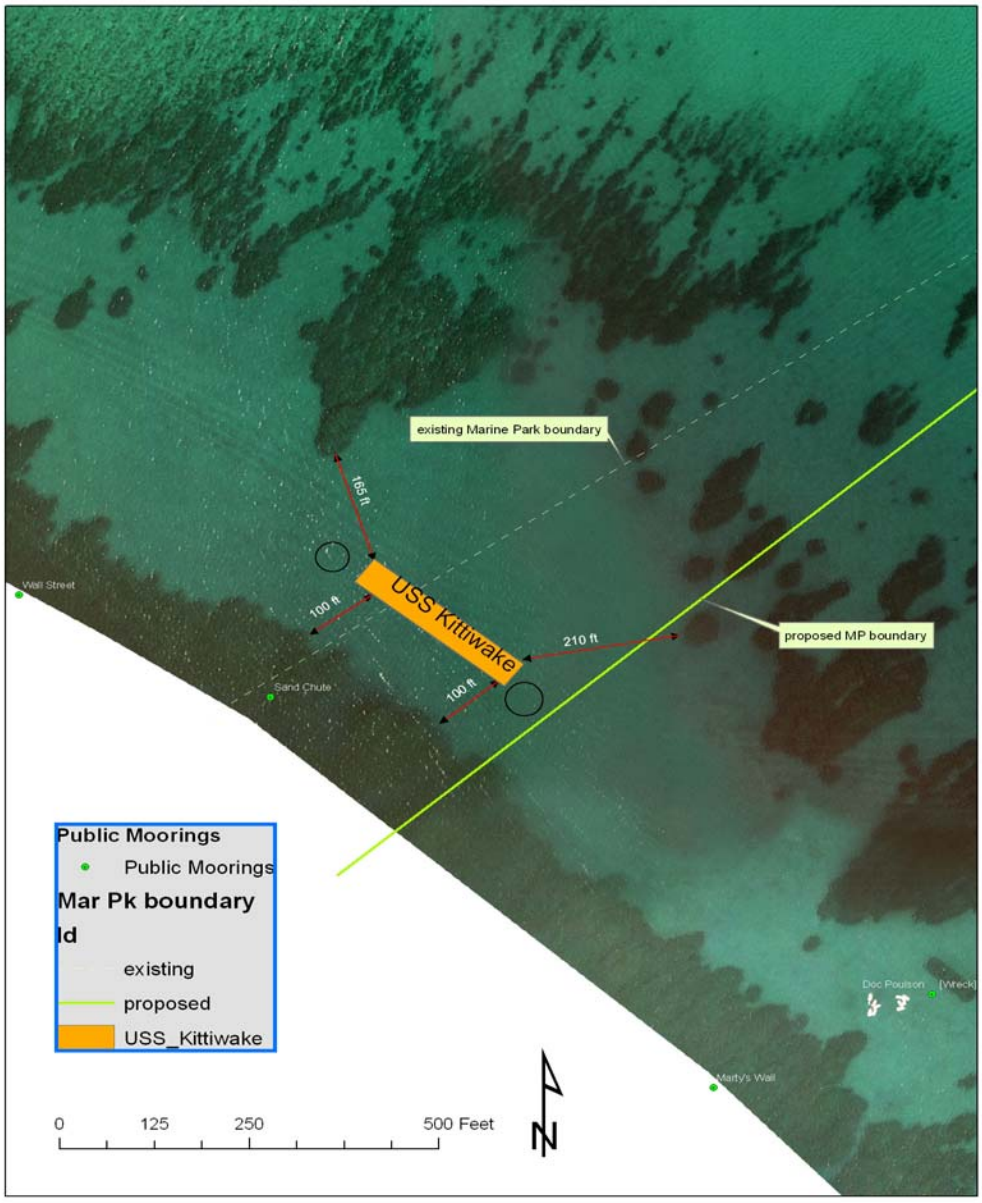
Diver safety cutouts are on the ship both vertically and horizontally, approximately every 50 feet. These entry/exit points are open areas that are labeled, allowing divers' easy egress from the ship at any point, and a navigational tool for divers to find their position on the ship. These exit/entrance areas will need to be maintained for cleaning of growth, maintaining smooth edges with no jagged protrusions fro diver entanglement and insuring that all entry/exit points remain safe and labeled for divers to pass through.
For the purposes of creating an interesting dive for divers and snorklers, some main and ancillary equipment/machinery has been left on board, but cleaned of any potential HAZMAT and cleaned to be free from oils, lubes, greases and fuels prior to sinking. This machinery/equipment must also be monitored to insure that it is not moving, breaking loose or deteriorating. In the event that is it, these items will be removed from the wreck.

4. LOCATION of the KITTIWAKE:

The site location of the Kittiwake is on the West side (generally the lee side) of Grand Cayman, slightly south of the dive site named "Sand Chute".

The sinking site is comprised of a large sand flat with no coral heads and a perimeter of a minimum of 100 feet plus in all directions around the Kittiwake to the nearest natural coral reef. The 100 foot minimum distance is on the wall/drop off side of the positioning of the Kittiwake, and inwards towards shore the minimum distance is in the 155 foot range.

Proposed Site of Kittiwake Wreck



The above aerial shows the position of the Kittiwake. The anchors, along with the ship, will be inspected on a monthly basis to insure their stability and that they remain securely attached to the Kittiwake. Repair or replacement will be completed for worn chain, shackles and the like as required.

The site is located at the following coordinates:

Latitude: 19 21.714'N 081 24.073W Bow

Longitude: 19 21.688'N 081 24.044W Stern

Sea Reference:
The site is located just off of the Sand Chute Dive Mooring

Bottom Composition:
The area is very flat with a sand bottom

Depths:
Stern: 56 feet
Bow: 64 feet

Direction from Bow to Stern: WNW

The area that the Kittiwake is located in is a Marine Park Zone, thereby restricting fishing activities on the wreck in addition to all other conditions of the Marine Park Conservation Laws in effect.

5. FUNDING:

The CITA, through its lease with the CIG will collect a per visitor fee by the way of a monthly license to visit the wreck as an entrance fee to the attraction. This fee will be paid by all companies and individuals that visit the wreck on a year round basis. Companies and private individuals may apply to the CITA for a license to visit the Kittiwake and only operators/individuals licensed by CITA will be allowed access to the attraction. Licenses will not be unreasonably withheld given that:

a) Licensees are members of the CITA

b) Commercial Licensees agree to carry liability insurance of a minimum of $1,000,000. US per incident and co-insure the CIG and the CITA and provide a written copy of the insurance certificate to CITA. Private individuals agree in the Licensee agreement to a release of liability to the CITA and the CIG for visiting the Kittiwake.

c) Licensees agree to the terms of the License agreement with CITA including timely payment of all fees due for the license and adherence to the operating and safety procedures of the license

This revenue stream will be used by CITA to fund the maintenance of the ship, administrative costs, and marketing costs and for other general use as so decided upon by CITA. The CITA liaison will at all times be able to administer the fund in a timely fashion and issue payments from a CITA Kittiwake checking account, with appropriate guidelines established by the CITA Board of Directors for single or dual signing given the amount of the check and documented procedures for approval of any major outgoings. Payments for any outgoings will be made in a timely manner to support the needs of the project.

Clear identification will be given to all paid visitors to the attraction by way of individual Medallions, Boat decals and/or other similar means. Identification of paid visitors will be

color coordinated to note the time period that entrance is valid for. (e.g. Day pass, annual pass)

The CITA will undertake a public awareness campaign for stay over visitors, cruise ship visitors, residents and all tourism partners to impart the importance of this attraction and its needs for ongoing maintenance for both visitor and environmental protection.

Violators that visit the wreck without payment of the fees or a valid license will be trespassing on a CITA managed/leased attraction and subject to the laws of the Cayman Islands.

CITA will set aside funds on a monthly basis from revenue to create a contingency fund for more substantive repairs in the amount of $35,000.US. The contingency fund, once achieved, will be maintained at this level (at a minimum) at all times by CITA.

6. INSURANCE, LIABILTY and LIMITATIONS:

At all times during the lease of the Kittiwake attraction to the CITA, the CITA will cause all Licensees to maintain liability insurance on the Kittiwake for any potential accidents or fatalities, and the CITA will have written verification that all Licensees have co-insured the CIG and CITA in this liability policy.

In no event will the CITA be responsible for liability matters arising from non-licensed visitors to the Kittiwake site.

In no event will the CITA be responsible for environmental damage caused due to acts of God except for cleanup after the fact.

7. REPORTING and REPAIR TIME REQUIRMENTS:

Monthly and any interim written inspection reports will be completed and complied for distribution by CITA contractors and submitted to the CITA, CIDOE, CIG and MARAD (2 year reporting requirement from the date of transfer of the Kittiwake to the CIG) and the CI Port Authority (relating to any navigational marker or ship hazard issues) within 2 days of completion. These reports will be maintained by the CITA office for a period of 5 years.

CIG may inspect the site at any time and a written report to CITA will be provided should any issues be found.

The reports will be sent to the contact person as noted in this agreement or as amended from time to time by email with return confirmation requested. Report wills follow a standard format as outlined following, with additional verbiage added as required to make the report clear. In the event of a major issue being found, in addition to emails, a phone call will be placed to bring heightened awareness to the issue at hand. At all times, should the designated contact person be away or unavailable, each liaison will appoint a backup contact to act in their stead.

In addition to the monthly inspections, the CITA will accept reports on an add hoc basis, from any operators visiting the wreck on a daily basis or also enforcement, police, maritime authorities, CIDOE or CIG, as is common practice in the dive/snorkel industry today. If an operator notices a missing mooring, fraying of a line, debris or another other environmental or safety concern, then this report will be dealt with for reporting and affecting repairs

under the same conditions and in the same time frames as if it was reported by the monthly maintenance team.

In the event that normal/minor maintenance is required on the wreck, the dive team performing the inspections will perform the maintenance during the inspections, such as removal of manageable debris, securing lines and the like.

In the event that additional equipment or manpower is required for maintenance, the work effort needed will be reported and a team capable of accomplishing the task will be deployed as soon as possible to affect the repair. This will normally be accomplished within 2 days of the inspection, allowing time to gather the required resources and for deployment.

In all events, the repair needed will be completed within 2 weeks of the report of the damaged area. (e.g. navigation marker damaged, larger debris inside/outside of the vessel needs removing, mooring line maintenance, exit/entry demarcation/welding/cutting needing to be redone, and the like) with time being of the essence in all instances.

If the problem is one that creates environmental, marine threat, diver, boat or navigational safety issues, (e.g. anchor detached, restricted compartment needs re-sealing, corroded access/exit hole has sharp edges, marine deterioration etc.) then a meeting with CIDOE and the CITA office will occur immediately to decide on a course of action, including allowing time for repairs, the severity of the problem, partial or complete closing of the wreck or other such direction that is appropriate to the problem. In all cases, time will be of the essence to complete all major repairs or problems on the wreck.

If the problem is of a catastrophic problem (e.g. wreck moves dangerously close to the reef or shore or onto the reef or shore) or of a problematic environmental nature, then a task force comprised of CITA and CIDEO representatives will be appointed immediately to address the problem. Funds for contingency catastrophic problems will be maintained by the CITA by setting aside funds on a monthly basis to build up a fund over time, after all expenses for monthly maintenance and costs have been satisfied. Any work done in this instance will be under the guidance, supervision and approval of the CIDOE of the work plan. All contractors used for this type of work will be certified, insured marine salvage company representatives (or other such credentials as are applicable to the problem at hand) that are licensed, skilled and have the appropriate equipment (Barge, crane, booms, lifting equipment, cutting/welding equipment, etc.) to accomplish the task required. Where possible, contracts will be awarded to Cayman companies.

In addition to regular Inspections, special trips will be made to the wreck immediately following storms, as soon as possible following the storm but requiring safe weather to visit the wreck with a boat and diver team to insure the safety of personal, as this is the most probable time to find a problem. The wreck will be checked for integrity, movement, breakage, anchor security, mooring lines and navigational markers being intact.

A ‘storm’ is defined as a strong Nor’ Wester with wave action greater than 9 feet and all hurricanes passing within 200 miles of Grand Cayman of a Category 3 strength or greater. Should an alternate storm/weather issue/event be of specific concern given its nature, direction or the like, the CIDOE or CIG can request that the CITA inspect the Kittiwake and this will be treated as if it is a storm per the definition provided herein.

For any major salvage operations that are beyond the capabilities of the monthly maintenance team, the following contractor will also be notified to assist in the remediation plan. As West Indian Marine Group sunk the Kittiwake and are capable of large scale

salvage operations, their expertise will assist the team in formulating the most expedient and effective remediation plan.

John MacKenzie, Managing Director
West Indian Marine Group
2nd Floor, Panton House
24 Warwick Drive, GT.
Grand Cayman, Cayman Islands,
Tel: (345) 945-7126
Fax: (345) 945-0613
Cell: (345) 916-1555
AH: (345) 945-4869
Email: john.mackenzie@wimarine.com

or other such contact/personal information as may be updated from time to time in writing to all parties.

8. SITE CLOSURE:

In the event that the Kittiwake site is deemed an environmental hazard or unsafe for humans, boats or creates navigational problems, a provision will be enacted to immediately shut down the site if such hazards exist. Dive, snorkel and submarine operators in addition to all contacts to this agreement and the general public will be notified by the CITA office of the closure of the site. Radio and newspaper notices will be used to communicate to the general public in addition to email communications to all commercial operators licensed to visit the site.

CITA will take the initiative to close the site or close access to portions of the site if conditions are unsafe. In addition to this, CIG will also have the right to close the site or portions of the site for safety concerns. In the later instance, CIG will notify the CITA of the intention to close the site along with a written report stating the reasons why the site is being closed. If CIG closes the site then the site would only re-open with CIG's consent.

Upon closure of the site, the CI DOE Marine Enforcement will assist the CITA in notifying vessels that the site is closed. Violators will be subject to the CI Laws.

Once repairs have been completed and the problem rectified, the site will be reopened with the same notification to all parties.

9. STAFFING:

The CITA will contract out on a paid for basis, monthly or interim inspections and maintenance on the Kittiwake. All personal contracted will be professional Divemasters/Instructors (or other such skills and expertise as may be required from time to time) with suitable training, guidance and proficiency in being able to carry out monthly inspections of the Kittiwake.

All personal contracted for monthly inspections and maintenance will be trained dive professionals that are in current status and insured, hold a certification in wreck diving, be proficient in lift bag deployment and underwater scooter use and have completed field training with a trainer that has done the job before.

The CITA will accept applications for this work from all CITA members and non-members as required and a review of their credentials will be completed prior to the applicant being

retained for services. New contractors will be added on a month to month basis as applications will continue over many years with various personal coming and going from Cayman. At all times, a letter from the applicants employer will be required authorizing the employee to do the work, and payment will be made to a Company or legally self employed individual.

CITA will maintain an on-going in-house training program for any rotational contractors used for monthly or interim inspections.

All contractors will be hired from legal Cayman Islands watersports companies with valid Trade and Business Licenses and to the extent possible, be members of the CITA. Should particular expertise be required from time to time, CITA reserves the right to contract with a Caymanian or non-Cayman based organization to accomplish the goals of this program. CITA will bear all costs for the monthly inspections and maintenance of the Kittiwake. A full time person will be hired by CITA for the day to day responsibilities of the M&M project.

The CITA Executive Director will be responsible for:

- Oversight of the program
- Following up on data collection and reporting to all appropriate individuals
- Oversight of the reporting on the financial contributions made for wreck visitation
- Scheduling monthly work required
- Scheduling specific programs/cleanups from time to time
- Reporting to the CITA Board of Directors
- Liaison with Port Authority, Department of the Environment, Ministry and Department of Tourism

For normal monthly inspections, on or about the 1st day of each month a team of approximately 6 divers will visit the wreck and complete inspections. This task requires the minimum of the following, but may be amended from time to time as required.

- A dive boat with Captain as a Surface Support Supervisor
- 6 divers
- task list for each diver with designated inspection area
- slates/pencils
- lights
- lift bags
- underwater scooters
- camera for photography
- underwater checklists
- waterproof tape measure for each inspector.

Photography or video will also be taken during this monthly inspection to monitor the growth on the reef of marine life.

A detailed list of all inspections to be done monthly is provided following. The inspectors will be several teams consisting of 2 dives in each team. Standardized assignments to specific tasks for each team will be done in advance of the inspections and the team reports will be consolidated into a single report at the CITA office for distribution.

It is anticipated that the teams will inspect as follows:

Team 1 – External to the wreck, Wheelhouse/Bridge (Bridge Deck), top external deck (Deck A), moorings, navigational markers and anchors
Team 2 – Upper most decks consisting of decks B and C
Team 3 – Lower most decks consisting of deck D and including sealed fuel tanks and the like

9. INSPECTION CHECKLIST:

Kittiwake M&M PROJECT - MONTHLY TASK LIST						
Inspection Date:			**Time:**			
Inspections by:						
Supervisor Signature:						
URGENT PROBLEMS:		**YES NO**				
	Task Description	**Ship Location (Deck/Frame)**	**Good/Okay**	**Fair/Minor**	**Problems/Additional Attention**	**Action Taken**
1	Diver entry/exit marking clean and visible					
2	Diver entry/exit holes - no sharp edges, tears, jagged edges					
3	Navigational Markers all intact and solid					
4	Diver entry/exit holes - no obstructions to safe exit					
5	Sealed compartments all intact					
6	Inspection inside the wreck for any loose debris, flotsam, tiles, parts of the ship or other that is loose					
7	Inspection of 360 degrees outside the wreck for any loose debris, flotsam, tiles, parts of the ship or other that is loose					
8	Check all 4 anchor sets for wear and tear, secure					
9	Dive Boat moorings - all intact and secure, no fraying, deterioration					

The above noted checklist will be expanded to include specific decks, locations, anchor numbering, all exit/entry points and the like. A complete set of ships plans will be included once all cutouts have been completed and assigned designated identifications. Current general arrangements for the Kittiwake are on file to the CITA office.

Following the checklist, a written report will be provided on any problematic areas in sufficient details as to outline the problem and where it exists.

In addition, all members will report immediately to CITA and CIDOE upon visiting the wreck, should any issues be noted while diving or snorkeling on the wreck. At all times the maintenance teams will coordination and report to CITA to insure that the process and tasks are completed according to environmental and diver safety standards. Prior approval from CIDOE on the process and methodology for the removal of anything from the wreck must be obtained.

The specific tasks involved in the M&M program are described following:

The following tasks are to be inspected and completed by the monthly dive inspection team. In the event that any task cannot be completed, this must be noted for immediate follow up action to the CITA for further distribution.

1. <u>On-going Diver and Snorkler Safety</u>

- Diver cutout markings being cleaned and clearly visible for navigation and safe/entry/exit points
- Remarking any exit points whereby the deck level and ship orientation are not visible to divers
- Sharp edges being removed to prevent any tears, rips, cuts or accidents to divers
- Navigational Markers on the wreck monitored and reported to the CI Port Authority. As this wreck is in 60 feet of water, although clear of all navigational channels, the Navigation Marker must be maintained at all times
- Any deterioration that might cause overhead snags or any deterioration that might block a passage, exit or entry point must be removed for diver/snorklers safety.
- Any sealed points in the wreck that become opened up must be reported. These areas might not be safe for diver access, and as such will have to be inspected and then opened up or resealed as appropriate.

2. <u>Debris Removal from time to time/ On-going protection of the surrounding natural reefs</u>

- Inspection both inside and outside the wreck for any loose debris, flotsam, tiles, parts of the ship or other items that could move and cause damage to the natural artificial reefs in the surrounding areas. Any of this debris needs to be removed from the water.
- Checking and repair of the additional anchors set on the bottom to assist in securing the wreck must be done, both the anchor security in the sand and the shackles and chains attaching the anchors to the ship.
- Inspection of the Ship, parts of the ship or anchors for any movement from its original location. Any movement of the ship must be reported immediately. Measurement from the ship to the closest natural reef must be recorded and photo or video documented.

3. Boat safety for mooring and Navigation

- Monitoring and reporting to CIDOE on the state of moorings for boat security. Any moorings fraying, loose, or lost need to be reported to CIDOE for repair/replacement, such work to be carried out by CITA or CIDOE as agreed.

4. Statistical information on visitations/Financial review as to return to the tourism sector versus investment

- Statistical data gathered includes the following. This data must be reported on a monthly basis to the CITA, MOT, DOT and CIDOE Offices by email or fax. The data reported will be shared with CITA members and Government Environmental and Tourism related departments. The information gathered will provide the partners the information required in order to see the revenue generated from and costs associated with the investment of acquiring and sinking the ship. This task is not part of the monthly ship inspections.

a) Visitors per month submitted and compiled monthly by CITA:

- Divers on the wreck
- Snorklers on the wreck
- Submarine passengers on the wreck
- Cruise visitors separated from stay over visitors

b) P&L Statement, complied monthly by CITA:

- Total cruise revenue per month
- Total stay over revenue per month
- Total costs per month including breakdown of ordinary costs and extraordinary costs

Growth on the wreck:

- Monthly photography or videography at selected points on the wreck to monitor growth of algae, coral, sponges, marine life. Specific locations on the wreck will be identified so that alternating contractors can shoot the same locations on a month to month and year to year basis.

Attachment 13 - Photo documentation on 121 paint samples